REPORT #
RRTAC 86-2

Characterization And Variability Of Soils Reconstructed After Surface Mining In Central Alberta

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Technical Advisory Committee

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RRTAC 86-2

CHARACTERIZATION AND VARIABILITY OF SOILS RECONSTRUCTED AFTER SURFACE MINING IN CENTRAL ALBERTA

By

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for

Reclamation Research Technical Advisory Committee

Alberta Land Conservation and Reclamation Council

March 1986

ALBERTA'S RECLAMATION RESEARCH PROGRAM

The regulation of surface distrubances in Alberta is the responsibility of the Land Conservation and Reclamation Council. The Council executive consists of a chairman from the Department of the Environment and two deputy chairmen from the Department of Energy and Natural Resources. Among other functions, the Council oversees programs for reclamation of abandoned disturbances and reclamation research. The reclamation research program was established to provide answers to the many practical questions which arise in reclamation. Funds for implementing both the operational and research programs are drawn from Alberta's Heritage Savings Trust Fund.

To assist in technical matters related to the development and administration of the research program the Council appointed the Reclamation Research Technical Advisory Committee (RRTAC). The Committee first met in March, 1978 and consists of eight members representing the Alberta Departments of Agriculture, Energy and Natural Resources, Environment and the Alberta Research Council. The Committee meets regularly to update research priorities, review solicited and unsolicited research proposals, arrange workshops and otherwise act as a referral and coordinating body for Reclamation Research.

Additional information on the Reclamation Research Program may be obtained by contacting:

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PREFACE

This is one of a series of reports that presents the findings of the Plains Hydrology and Reclamation Project (PHRP), an interdisciplinary study that focuses primarily on hydrologic aspects of reclamation of surface coal mines in the plains of Alberta. This research has been conducted by the Alberta Research Council as part of the Alberta Government's Reclamation Research Program. The program is managed by the Land Conservation and Reclamation Council and is supported by the Heritage Trust Fund.

The focus of PHRP is to develop a predictive framework that will permit projection of success for reclamation and impact of mining on water resources on a long-term basis. The predictive framework is based on an understanding of processes acting within the landscape so that in the future, mine sites that are not totally analogous to those that have been studied can be evaluated as well.

The project involves a holistic approach to reclamation by integration of studies of geology, hydrogeology, and soils, not only in the proposed mining area but also in the adjoining unmined areas. This approach permits the assessment of impacts and of long-term performance, not only in reclaimed areas but also in the surrounding area.

The research of PHRP has been directed toward the following two major objectives and eight subobjectives:

OBJECTIVE A

To evaluate the potential for reclamation of lands to be surface mined. The focus is on features of the landscape that make it productive in a broad sense not restricted to revegetation.

Subobjective A-1

To assess and evaluate the potential for long-term degradation of reclaimed soils through salt build up.

Subobjective A-2

To assess and evaluate the effectiveness of topographic modification and selective placement of materials to mitigate deleterious impacts on chemical quality of groundwater.

Subobjective A-3

To assess the availability of water supply in or beneath cast overburden to support post-mining land use, including both quanitity and quality considerations.

Subobjective A-4

To evaluate the productivity potential (capability) of post-mining landscapes and the significance of changes in capability as a result of mining.

Subobjective A-5

To assess and evaluate limitations to post-mining land use posed by physical instability of cast overburden.

OBJECTIVE B

To evaluate the long-term impact of mining and reclamation on water quantity and quality.

Subobjective B-1

To assess and evaluate the long-term alteration of quality of groundwater in cast overburden and surface water fed from mine spoil as a result of the generation of weathering products.

Subobjective B-2

To assess and evaluate infiltration, groundwater recharge and groundwater-surface water interactions within cast overburden.

Subobjective B-3

To characterize the groundwater chemistry generated within cast overburden

Studies directed at these objectives began in 1979 at the Battle River site in east-central Alberta. Work began in 1982 at a second study area at Highvale Mine south of Lake Wabamun. Significant progress had been made on all project objectives by the end of the first phase of study in March of 1984. This present series of reports summarizes the state of our knowledge at the end of this first phase of study. Work is now continuing on the Phase II objectives to gain an even greater understanding of the complex physical and chemical processes in reclaimed landscapes.

This report presents a part of the results of Subobjective A-4, to evaluate the productivity potential (capability) of post-mining landscapes and the significance of changes in capability as a result of mining. The first step in assessing the capability of reconstructed soils is to describe and characterize the physical and chemical properties of the soils. An important part of this characterization is to identify the degree of spatial variability in these properties. The report presents data and conclusions derived from both the Battle River and Highvale study sites.

ABSTRACT

Reconstructed soils representing different materials handling and replacement techniques were characterized and variability in chemical and physical properties was assessed. The data obtained indicate that reconstructed soil properties are determined largely by parent material characteristics and further tempered by materials handling procedures. Mining tends to create a relatively homogeneous soil landscape in contrast to the mixture of diverse soils found before mining. On a landscape scale, reconstructed soils are less variable than unmined soils. On a local scale, reconstructed soils are more variable than natural soils. The data suggest that one hole per sampling site provides adequate representation of pH, sodium adsorption ratio, percent saturation and clay content. An inspection density in the range of one inspection per 1 to 5 ha is appropriate for the "mapping" of reconstructed soils. The proposed sampling intensity for characterization of reconstructed soils is one site per 5 to 10 ha.

ACKNOWLEDGEMENTS

This research was supported by the Alberta Heritage Savings Trust Fund and administered by the Reclamation Research Technical Advisory Committee of the Alberta Land Conservation and Reclamation Council.

Appreciation is expressed to the many landowners, including Manalta Coal Ltd. and Luscar Ltd., for allowing access to their respective properties.

1. INTRODUCTION

During the proposal stage of the Plains Hydrology and Reclamation Project it was felt that the concept of productivity could be utilized in comparing pre- and post-mining situations. The original approach to a meaningful assessment of productivity was to obtain data from local farmers and the mine operators because it is common practice for farmers to manage reclaimed areas through arrangements with the mine operator(s).

Since the key to productivity is management, the control of management inputs and maintenance of records could provide a valid comparison of yield from reconstructed soil areas with that from unmined areas. An advantage of utilizing this approach is that it provides for large-scale testing or field size rather than plot size results.

The above-mentioned approach is feasible but it is perhaps more appropriate to first characterize reconstructed soils and determine their suitabilities and limitations relative to agricultural production. Initially, therefore, emphasis is placed on development of a system for rating reconstructed soil capability as opposed to determining the kind and levels of inputs that may be required to sustain desirable yields.

The intent of this aspect of the project is to develop a rating system to assess the relative capability of reconstructed soils in the reclaimed landscape. The details of the rating system are presented in a separate report. Included in this report are discussions concerning the characterization and variability of reconstructed soils. The data obtained from the characterization process are utilized in the development of the capability rating system.

2. CHARACTERIZATION OF RECONSTRUCTED SOILS

2.1 THE STUDY

In order to determine the agricultural capability of an area prior to disturbance and then be in a position to speculate on the potential capability of the post-mining landscape, one must have good, relatively detailed, soils information. As a result a soil survey at a scale of 1:10 000 was conducted at the Battle River site to provide detailed soils information for land adjacent to areas already mined (Macyk and MacLean 1983). This information provided a basis for assessing the capability of the soils for agricultural production prior to mining and will also be useful for future reference when considering the effects of surface mining on adjacent unmined areas.

The survey was conducted at the Battle River site because the existing soil survey information presented at a scale of 1:190 000 was outdated and not adequate for the types of interpretations that were to be made in this study. Detailed mapping of areas destined to be mined was completed by the individual mine operators (Forestburg Collieries Ltd. 1979; Manalta Coal Ltd. 1979). A detailed soil survey was not conducted at the Highvale site because the generalized reconnaissance information (Lindsay et al. 1968) is relatively recent and more detailed work was done by TransAlta Utilities Ltd. in the area.

In addition to mapping and evaluating the pre-mining soils, the reconstructed soils of the post-mining landscape were "mapped" and characterized. The mapping of reconstructed soils was done on the basis of topography, drainage and materials handling procedures or practices. This was followed by a relatively extensive sampling program to characterize the soils in the areas representing different materials handling/replacement techniques. The major techniques assessed included untouched spoil piles, spoil piles levelled, spoil piles levelled and covered with topsoil, and spoil piles levelled and covered with subsoil and topsoil (topsoil/subsoil/spoil sequence). Although all of the different materials handling procedures were characterized, ranging from no levelling (untouched spoil piles) to topsoil/subsoil/spoil sequences, emphasis was placed on the more recently adopted procedures which are likely to remain in place for some time in the future.

Sampling sites were selected randomly and total sampling depth ranged from 30 cm to 5.0 m. This range was manifested by the ease of collecting the samples - in the case of sites exemplifying the shallow depths there was some form of hindrance to the coring tube. As the sampling program was conducted over a three-year period, techniques were modified on the basis of the results obtained. For example, in 1983 it was deemed appropriate to sample only the top 1.5 m of material and to have three holes drilled at close proximity for each site selected to provide an indication of the within-site variability as compared with between-site variability. Virtually all sampling was done according to the following depth (cm) intervals: 0 to 15, 15 to 30, 30 to 45, 45 to 60, 60 to 75, 75 to 90, 90 to 120, and 120 to 150 cm, and in 30 cm increments thereafter to depth. A total of 1588 samples was collected. Analyses conducted included pH (water and $CaCl_2$ methods), % saturation, electrical conductivity, sodium adsorption ratio, extractable sodium, calcium, potassium and magnesium, sulphate, calcium carbonate equivalent, and particle size distribution (% sand, silt, clay).

The data are presented in the appendices and discussion thereof is presented within the text of the report.

2.2 SUPPLEMENTARY INFORMATION

Additional information pertinent to reconstructed soils was made available by the individual mine operators. Luscar Ltd. (1982) provided data for the Diplomat Mine which was obtained through in-house data collection relative to reconstructed soil characterization as well as management thereof, including yield data. In addition, Luscar Ltd. provided data collected by Alberta Environment at the Diplomat site (personal communication). TransAlta Utilities provided information on the reconstructed soils at the Highvale Mine (personal communication).

The information provided was certainly useful but because different sampling techniques were employed it was not possible to incorporate this data with the data collected in association with this project. Therefore, the supplementary data were not included in summaries and statistical analysis.

2.3 RECONSTRUCTED SOIL CHARACTERISTICS

Minesoils or reconstructed soils are youthful soils whose many characteristics are determined by man-controlled influences rather than by natural processes. On natural landscapes or undisturbed areas, soil boundaries follow geomorphic features like slope position and drainage. On reclaimed land, soil delineations correspond to differences in mining practice and/or soil reconstruction techniques. For the purposes of this study, eight units were defined for mapping and characterization of reconstructed soils and one unit was designated to represent undisturbed soils.

RC1 - Spoil piles essentially untouched (basically retain original configuration)
RC2 - Spoil piles levelled prior to revegetation
RC3 - Spoil piles levelled and topsoiled prior to revegetation
RC4 - Spoil piles levelled, subsoiled and topsoiled prior to revegetation
RC5 - Spoil piles levelled and covered with ash prior to revegetation
RC6 - Levelling of spoil piles completed or in progress
RC7 - Areas where seasonal ponding occurs
RC8 - Areas where the land surface was disturbed and manipulated but actual mining likely did not occur
RC9 - Utilized for undisturbed soils

2.3.1 Sample Site Distribution

Of the areas designated (Table 1), units RC2, RC3 and RC4 are dominant in terms of areal extent. Emphasis relative to number of sampling sites, etc., was placed on units RC3 and RC4, mainly because they are the dominant soil reconstruction procedures presently utilized.

Table 1. Sample site distribution.

Mat Handling	Diplomat	Vesta	Highvale
RC1	5	-	-
RC2	29	5	-
RC3	43	15	-
RC4	-	42	26
RC5	-	5	-
RC6	-	-	-
RC7	-	-	-
RC8	-	-	-
RC9	19	13	-
	96	80	26

The relative distribution indicated in Table 1 reflects to a large extent the areal distribution of the areas affected by the various materials handling techniques. At the Diplomat Mine the most advanced materials handling technique involves placement of topsoil/spoil, mainly because the spoil is comprised of relatively good quality till material. The most advanced procedure involving placement of topsoil/subsoil/spoil represents the largest number of sites evaluated at Vesta Mine. A relatively large number of samples were obtained in RC3 areas as well. However, at many of the sites in the RC3 areas it was impossible to penetrate much beyond the 50 cm depth because of problems associated with the spoil material.

At Highvale Mine the sample sites were located in areas characterized by the topsoil/subsoil/spoil sequence.

2.4 DATA SYNTHESIS

For purposes of interpretation, data synthesis was conducted on an individual mine basis because the mines are located in different settings and have different pre-mining characteristics.

The Diplomat and Vesta Mines at the Battle River site differ considerably from the Highvale Mine in respect to climate, vegetation, soils and geology. The Diplomat and Vesta Mines, which are essentially adjacent to each other, are somewhat different in terms of soils and surficial materials.

The complete data set is provided in the appendices. Graphs representing mean values for the different materials handling regimes, depths and the various parameters measured are utilized to reduce the volume of data used for interpretation. Graphical presentation of Highvale data is included with the Vesta data because it did not appear necessary to prepare an additional set of graphs, each representing only one curve.

It will be noted that the graphs presented relate to the top 150 to 300 cm of the reconstructed profile. The reason for the 3 m maximum is that, although a number of holes were sampled in excess of 3 m, the number was not large enough to develop statistical inferences. Overall, the number of sites where sampling depth was in excess of 150 cm are somewhat less in number, simply because the 1983 field sampling program did not involve sampling beyond 150 cm. The reason for limiting the sampling depth is that it was felt more useful to obtain samples from the top 1.5 to 2 m at a greater number of sites as opposed to sampling fewer sites to greater depths. A review of the literature pertinent to crop rooting depth and the consideration that the depth to be evaluated for capability classification purposes would not exceed 150 cm also had a bearing on the sampling scheme utilized. Therefore, the mean values on the curves are based on a larger population for the top 150 cm than for depths below that.

The following sections describe the characteristics of the reconstructed soils resulting from the different materials handling procedures with emphasis placed on the Battle River site. Figures 1 to 26 present mean values for the various parameters. A few explanatory notes about the way the graphs are designed and the legend utilized are in order.

1. The data point representing the sample acquired in the 0 to 15 cm depth range appears mid-way between the 0 and 15 cm designations on the depth scale. The same is true for all other depth ranges.
2. D RC3 = Diplomat Mine, RC3 area (previously defined)
   H RC4 = Highvale Mine, RC4 area
   V RC9 = Vesta Mine, RC9 area

2.4.1 RC1 Areas

RC1 areas include locations where the spoil piles were essentially untouched or basically retained their original configuration. Only a limited number of sites were sampled in the vicinity of Diplomat Mine where this type of landscape still exists. Each site was sampled to a maximum depth of 1 m. At the time of the sampling program the last of the old spoil piles that once existed at Vesta Mine were in the process of being levelled.

The data indicate that the characteristics of the untouched spoil piles, especially the surface materials, are superior to the levelled (RC2) materials. Specifically pH, PSAT, EC, SAR and SO_4 are lower, and in the case of EC and SAR are considerably lower for the RC1 as compared with the RC2 materials.

This indicates that the levelling of spoil piles alone does not alter or, more importantly, does not improve the quality of the reconstructed material. The slopes associated with these areas preclude the use of farm equipment and limit agricultural use to improved pasture at best. However, these RC1 areas do provide excellent sites for recreation and wildlife.

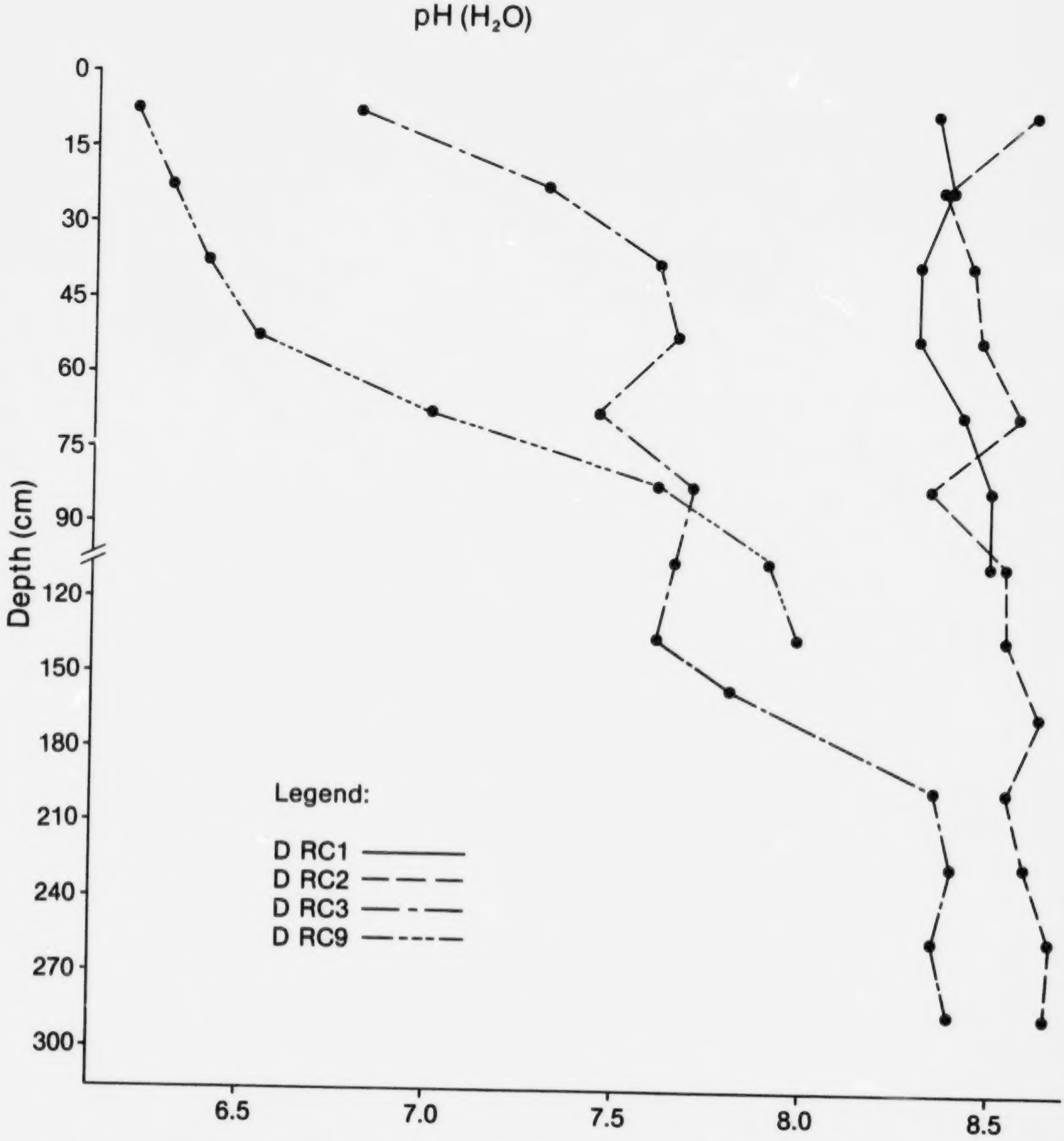


Figure 1. Mean values for pH at Diplomat Mine

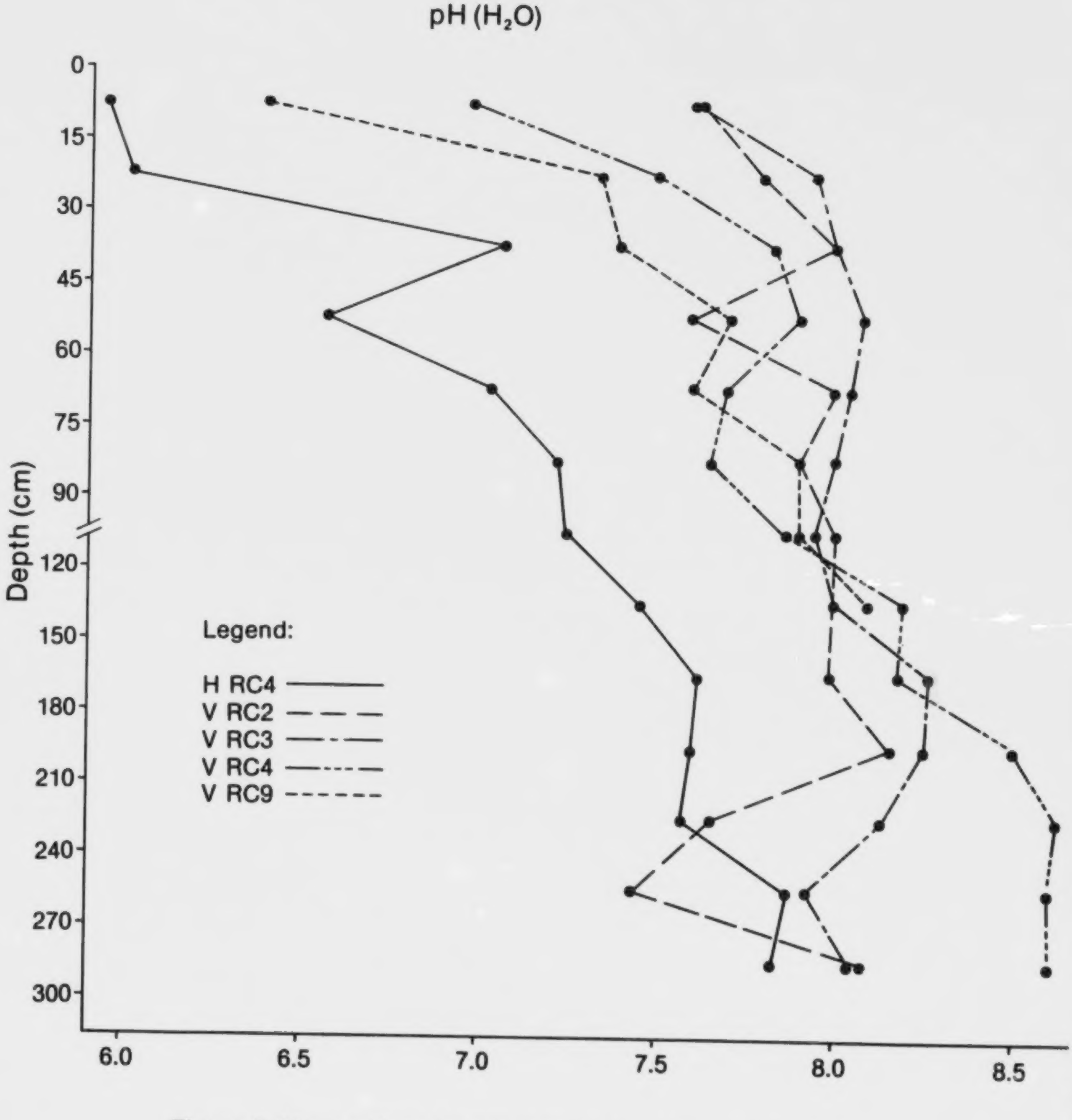


Figure 2. Mean values for pH at Vesta and Highvale Mines

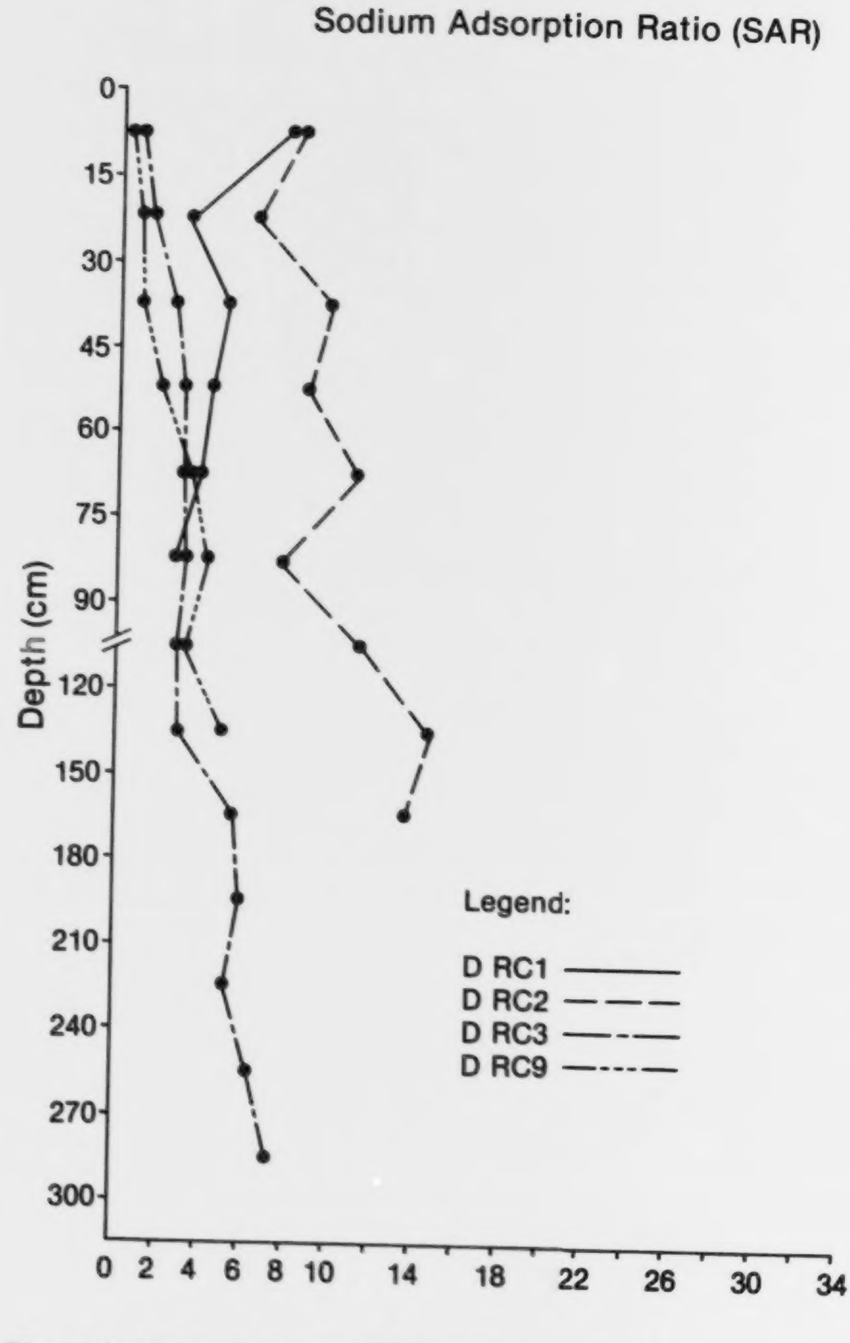


Figure 3. Mean values for SAR at Diplomat Mine

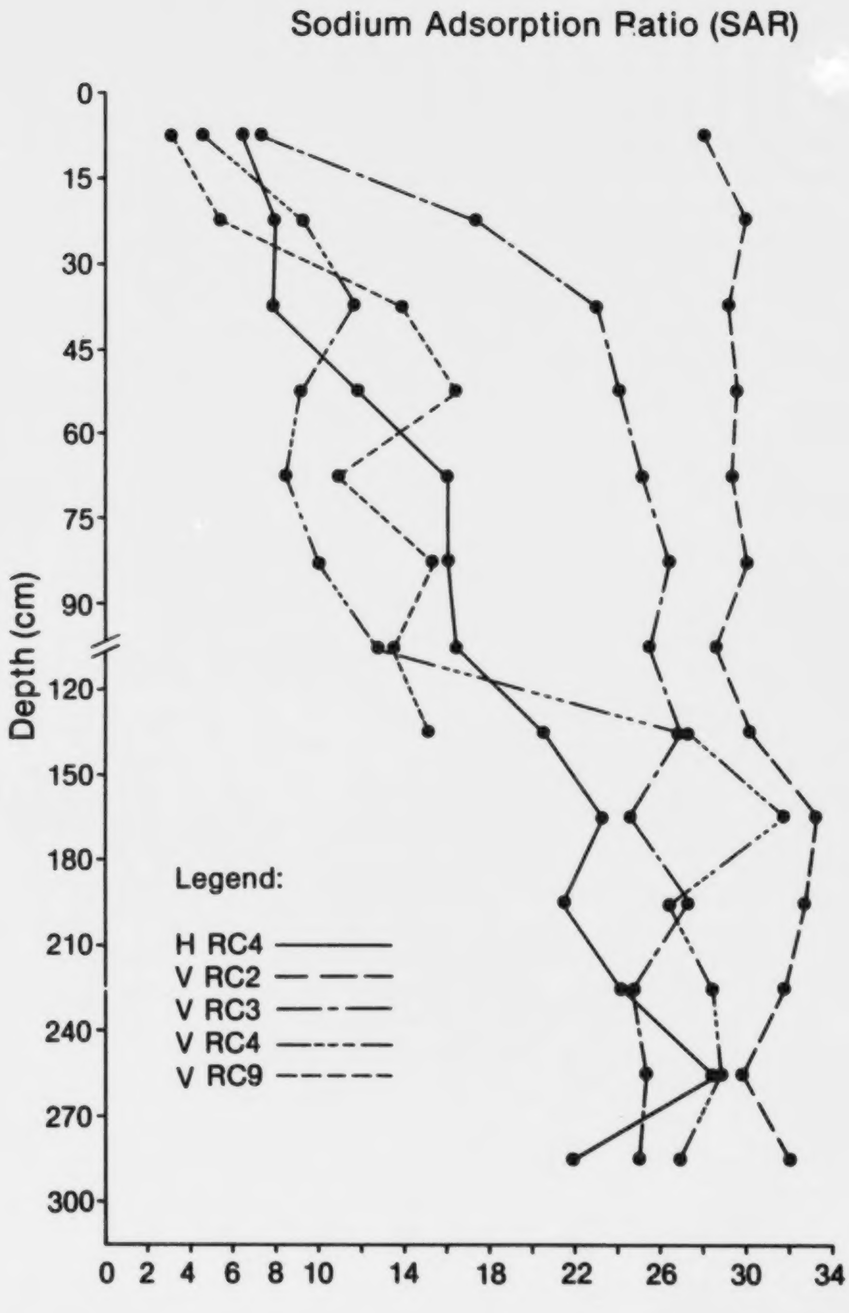


Figure 4. Mean values for SAR at Vesta and Highvale Mines

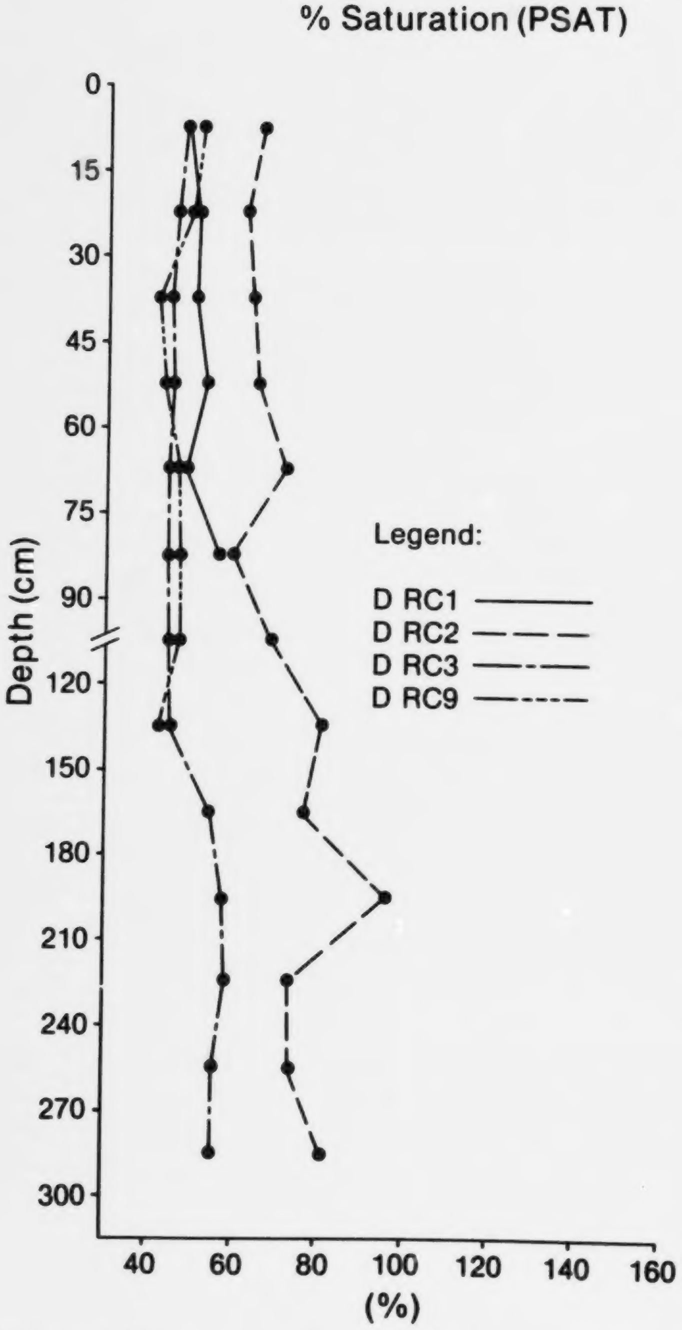


Figure 5. Mean values for PSAT at Diplomat Mine

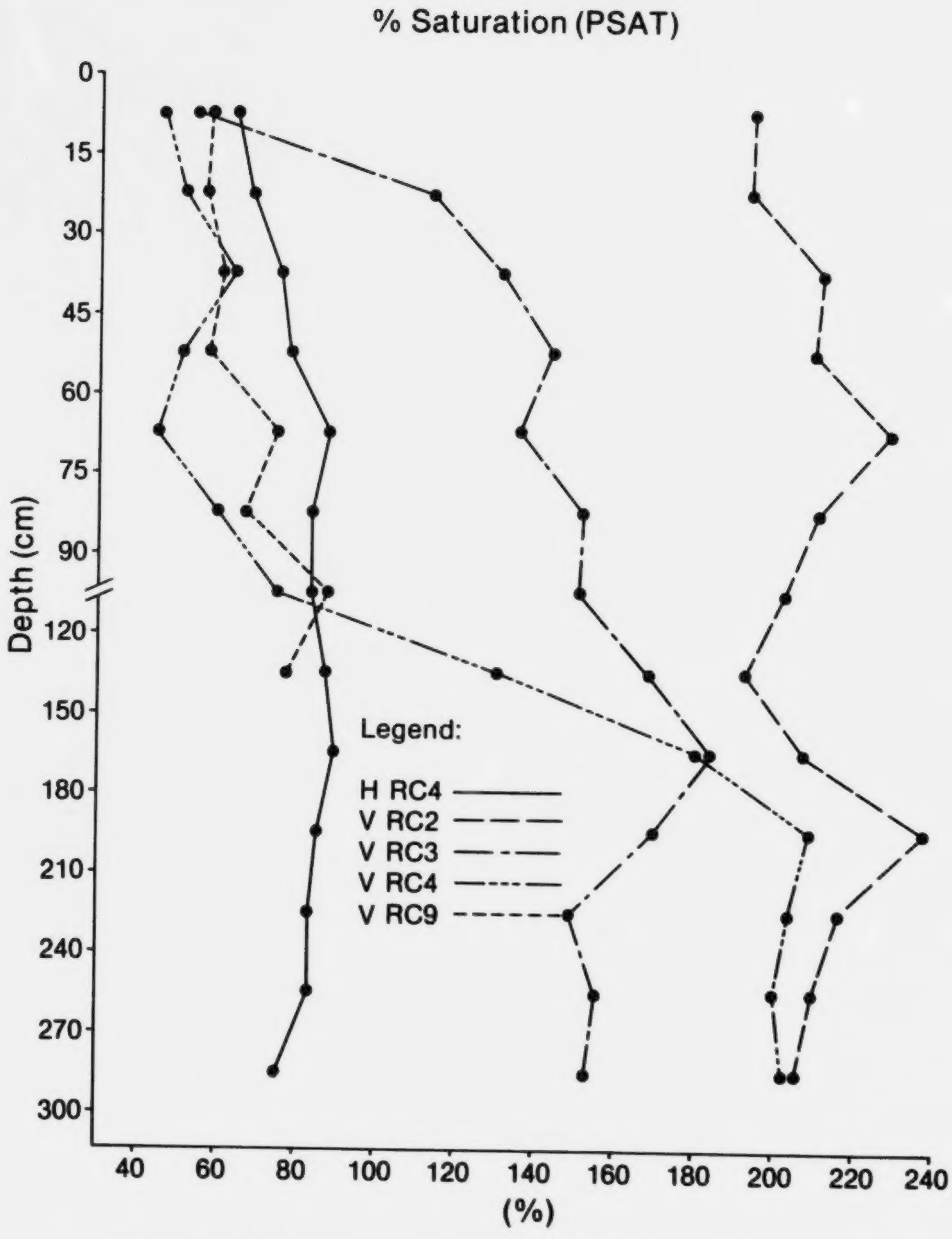


Figure 6. Mean values for PSAT at Vesta and Highvale Mines

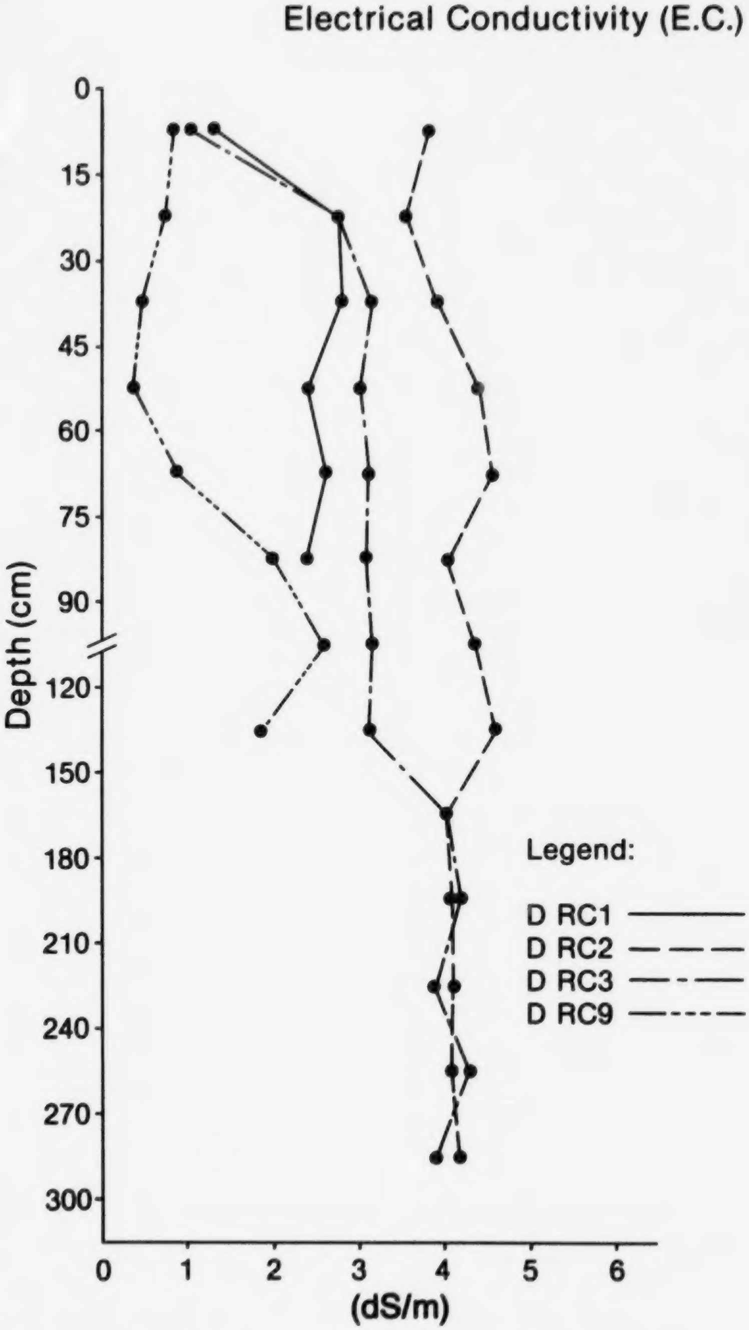


Figure 7. Mean values for E.C. at Diplomat Mine

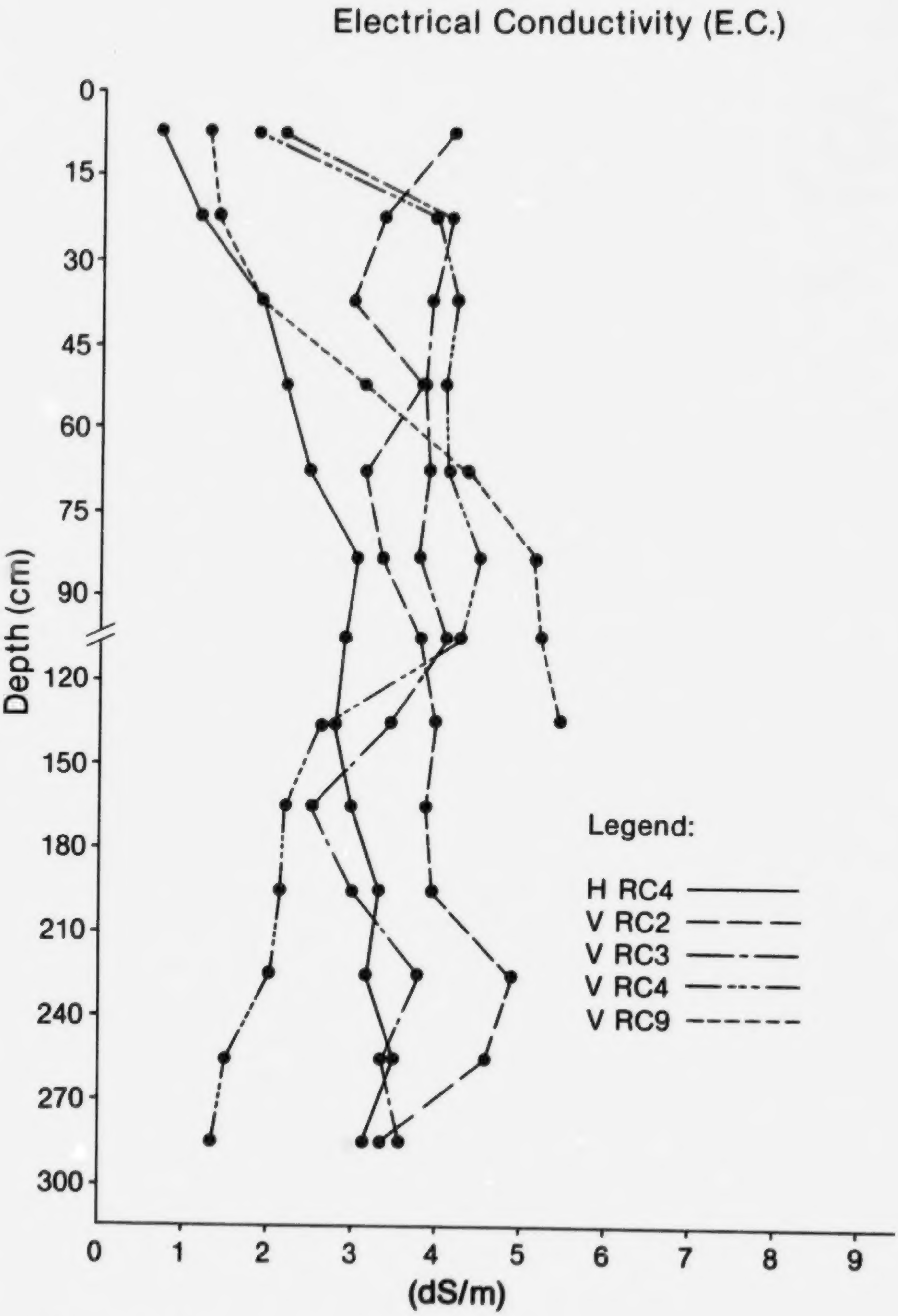


Figure 8. Mean values for E.C. at Vesta and Highvale Mines

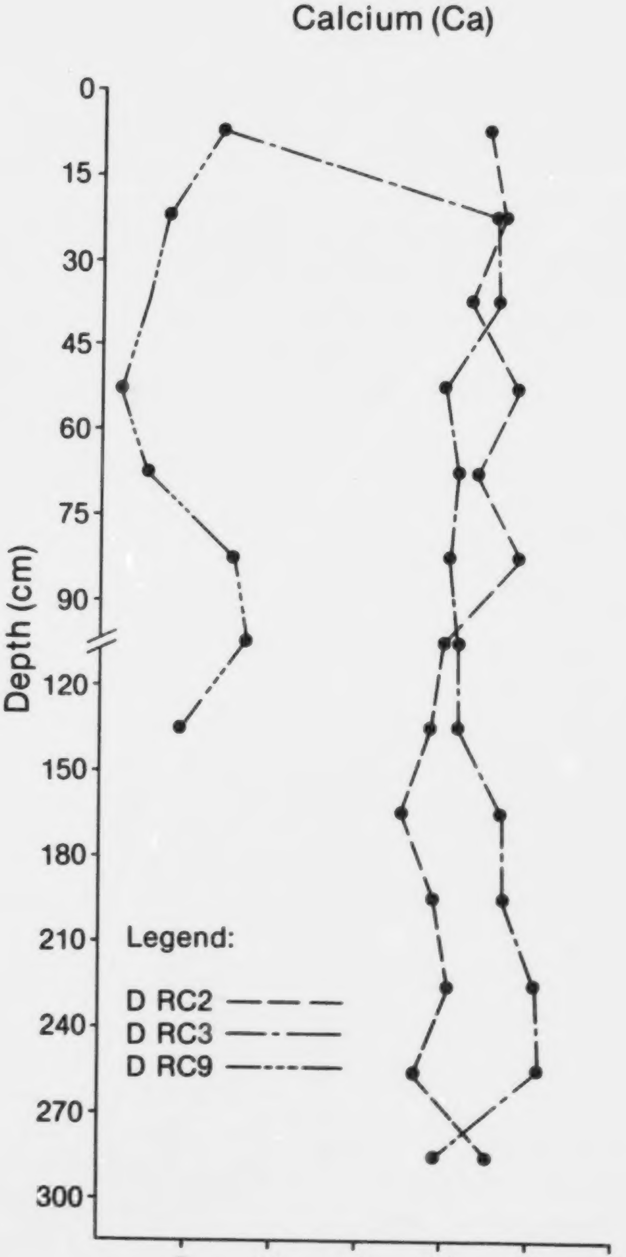


Figure 9. Mean values for Calcium at Diplomat Mine

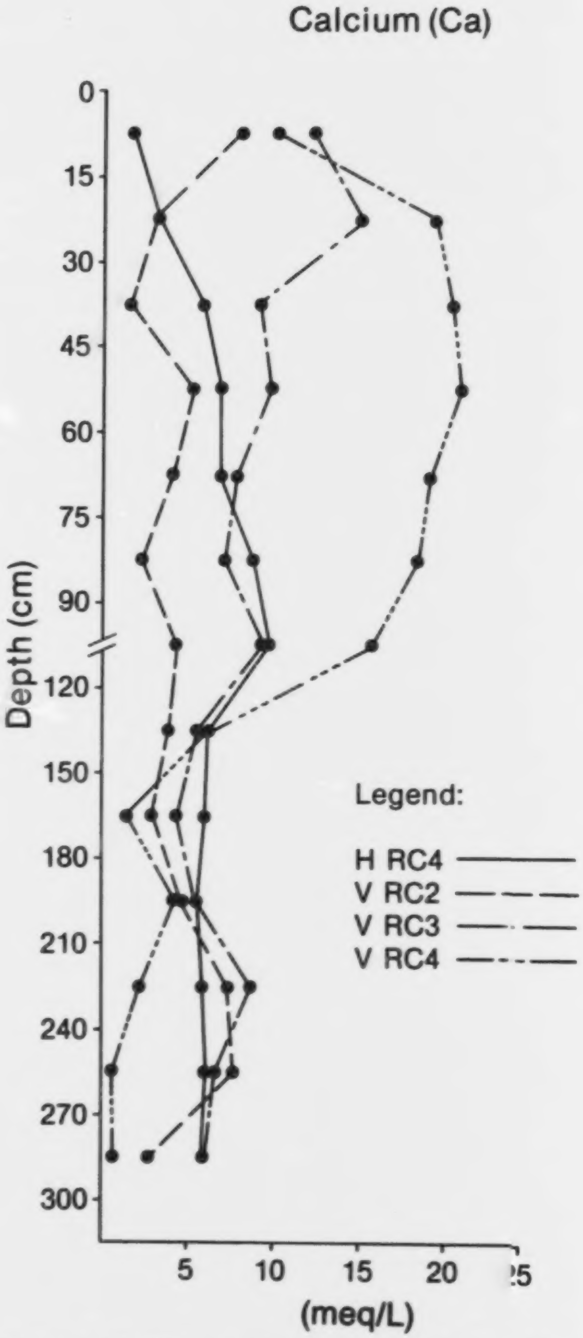


Figure 10. Mean values for Calcium at Vesta and Highvale Mines

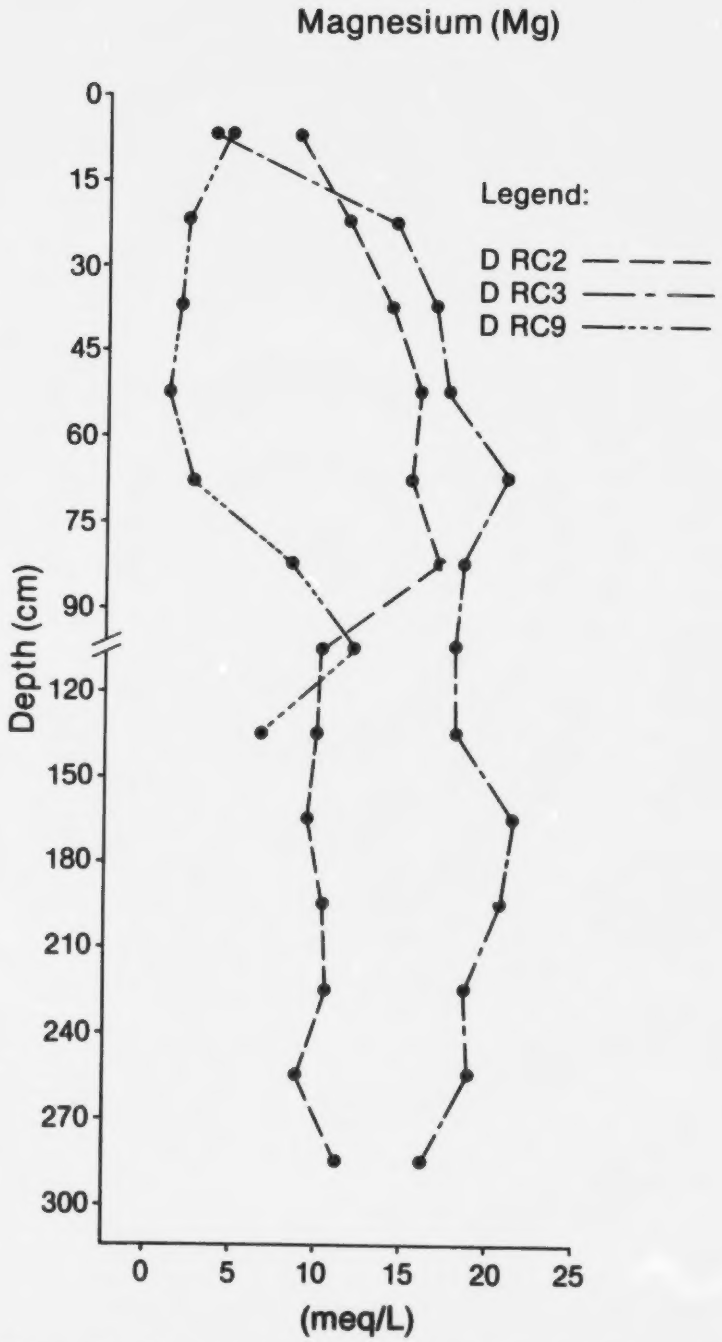


Figure 11. Mean values for Magnesium at Diplomat Mine

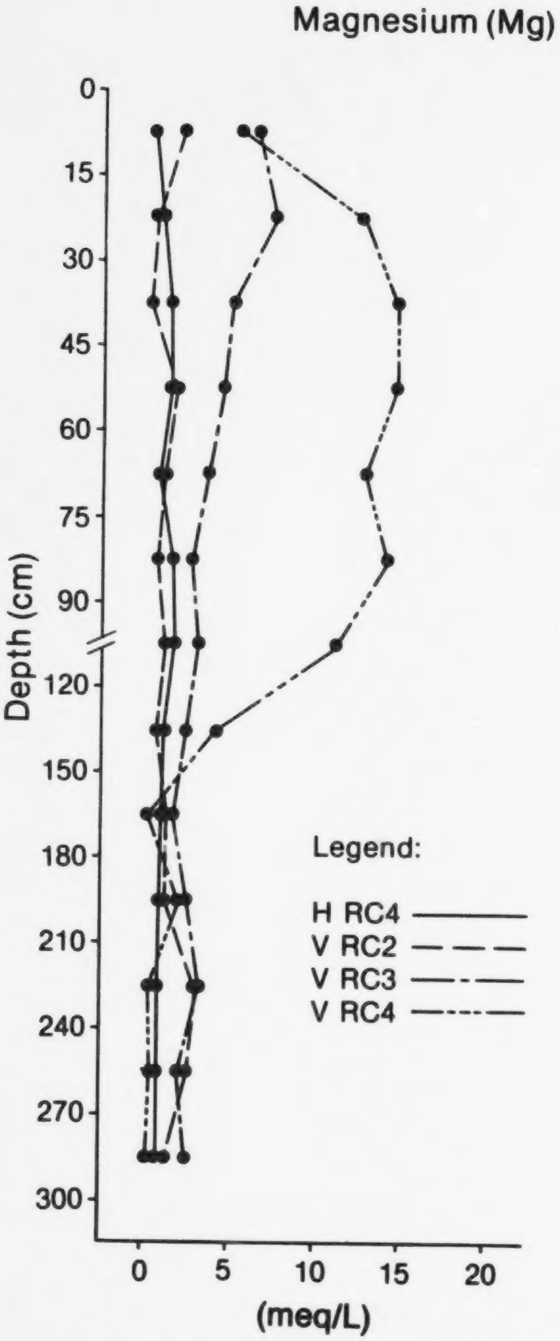


Figure 12. Mean values for Magnesium at Vesta and Highvale Mines

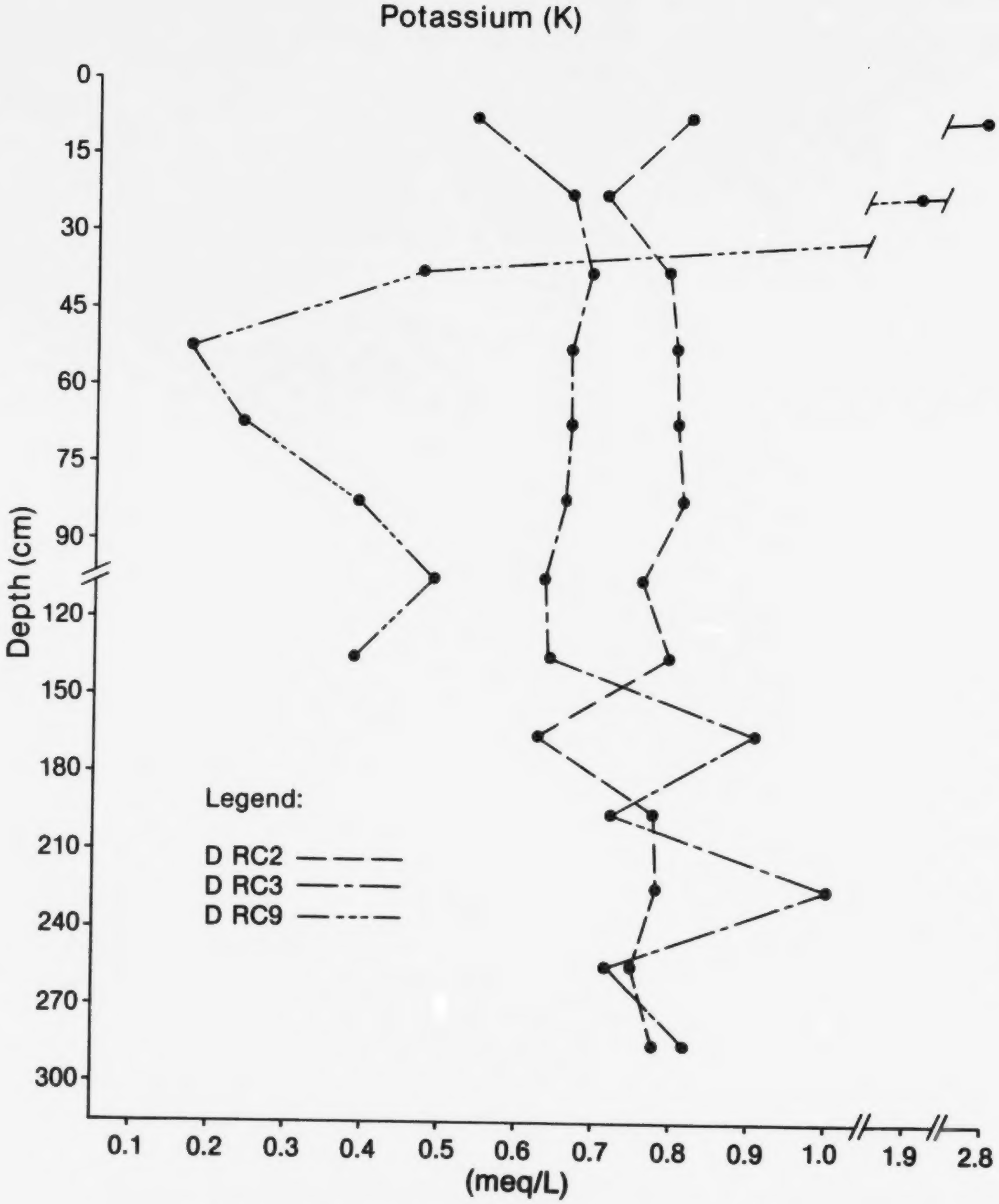


Figure 13. Mean values for Potassium at Diplomat Mine

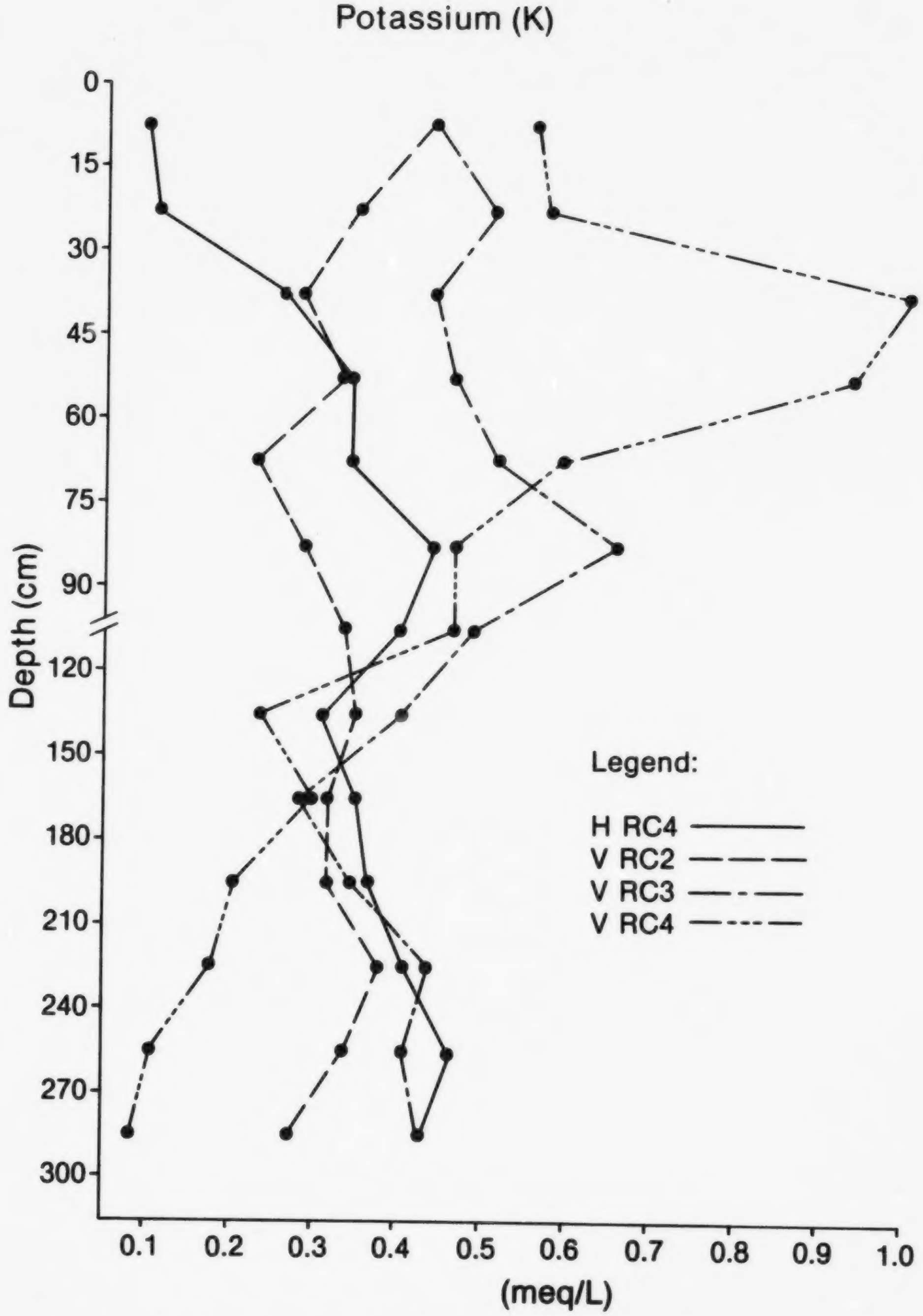


Figure 14. Mean values for Potassium at Vesta and Highvale Mines

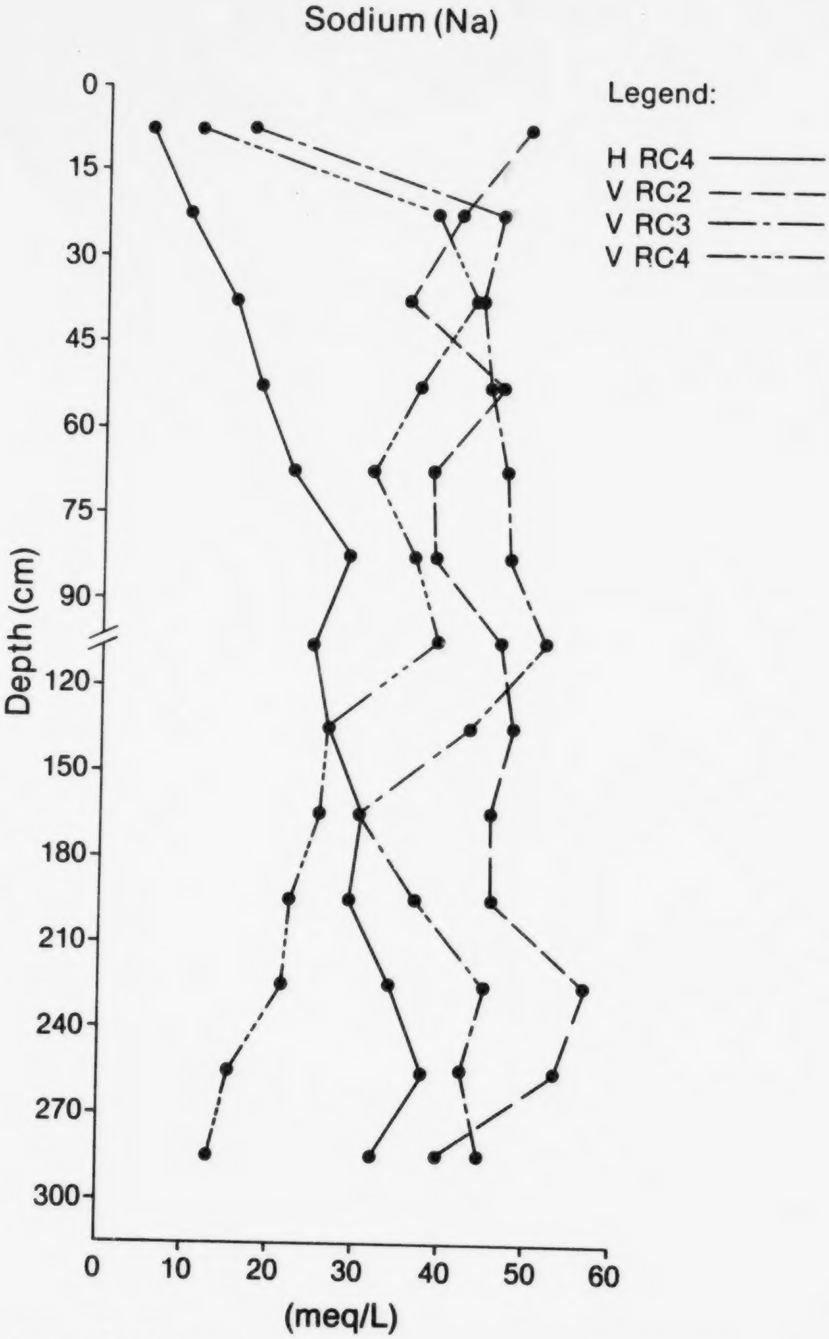


Figure 15. Mean values for Sodium at Vesta and Highvale Mines

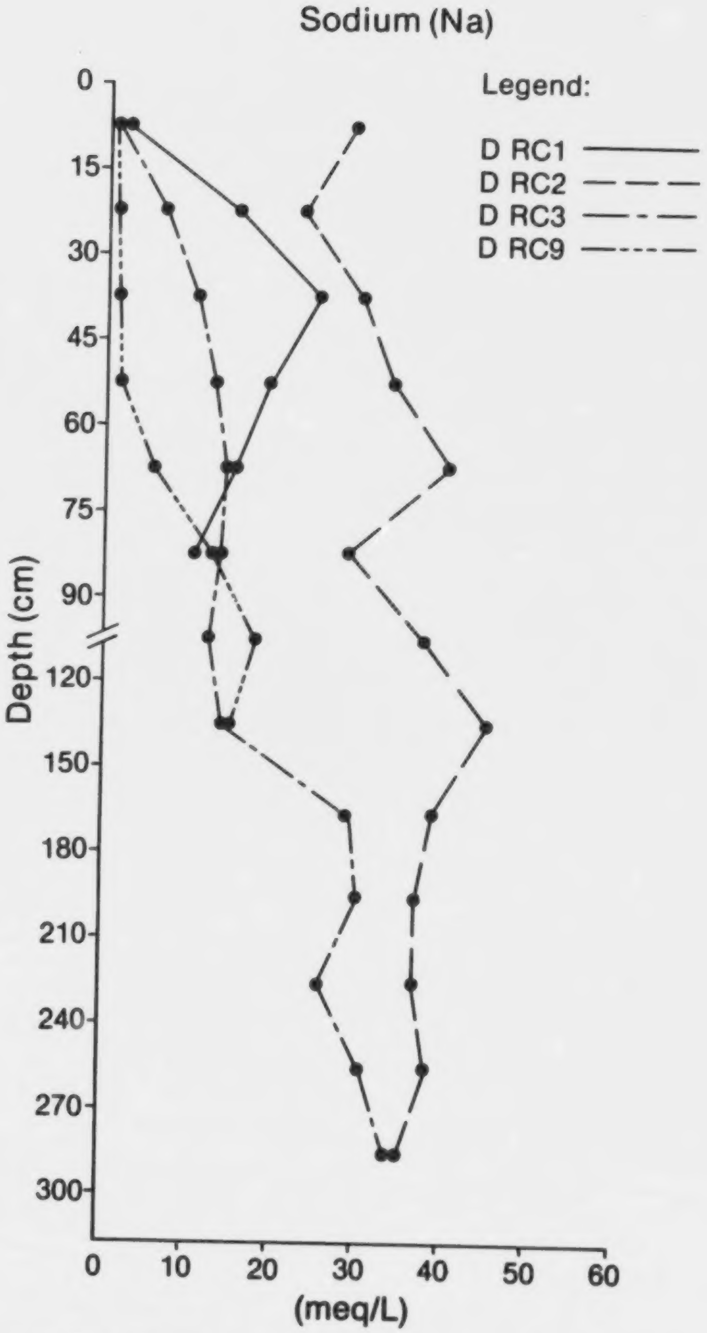


Figure 16. Mean values for Sodium at Diplomat Mine

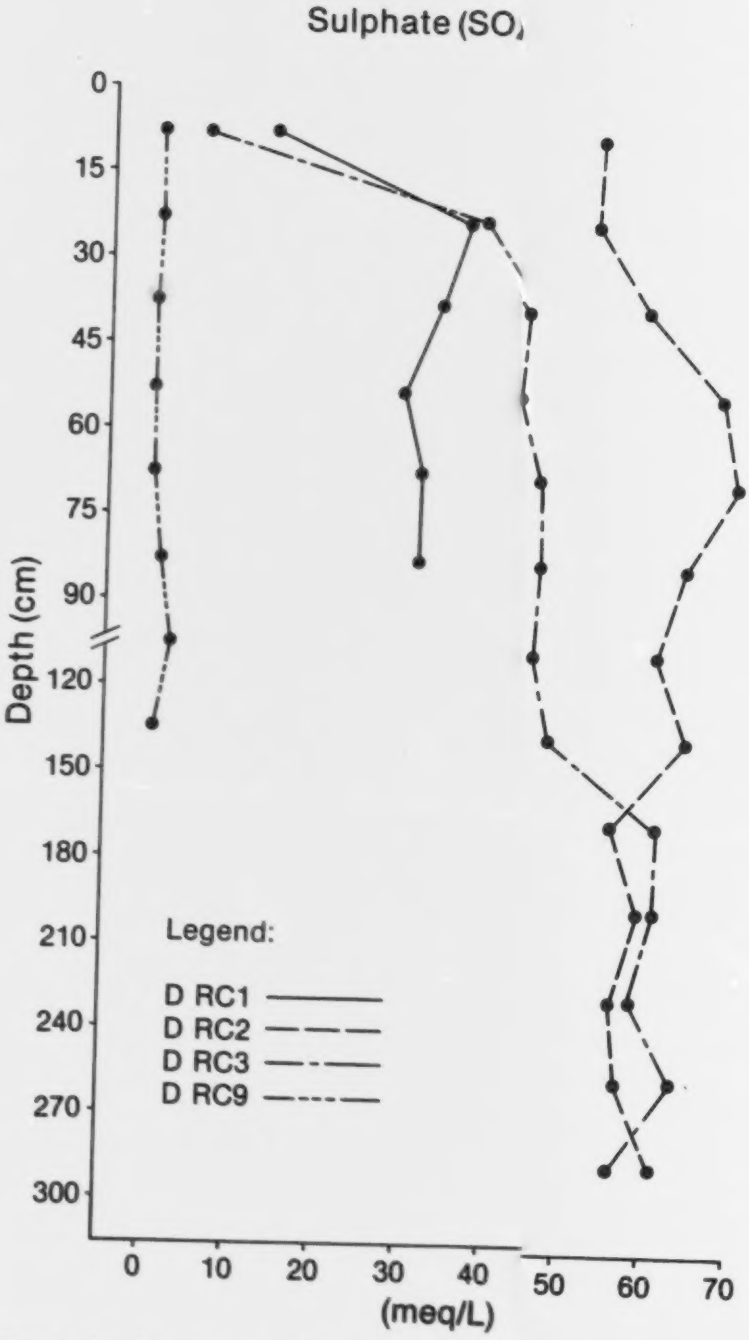


Figure 17. Mean values for Sulphate at Diplomat Mine

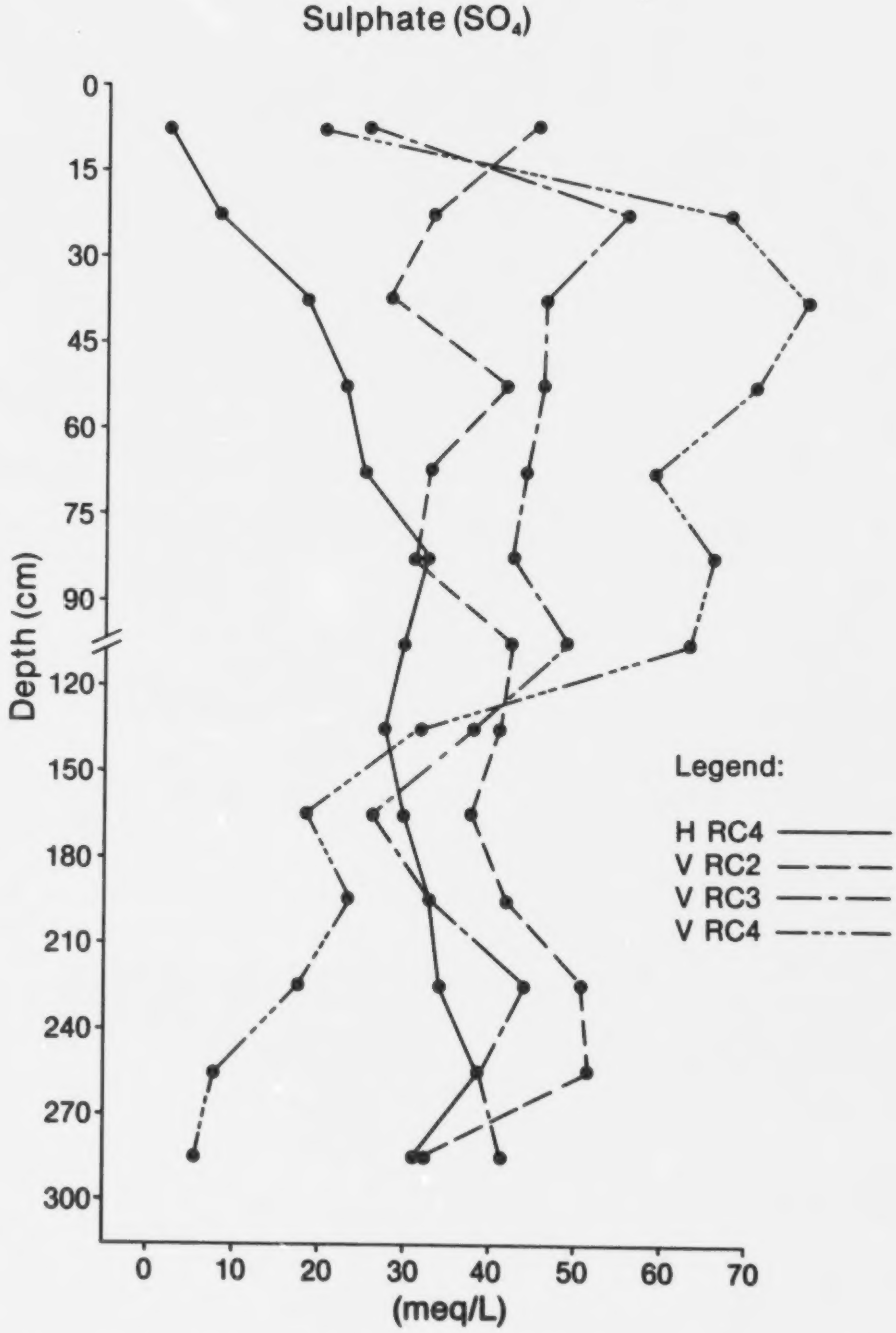


Figure 18. Mean values for Sulphate at Vesta and Highvale Mines

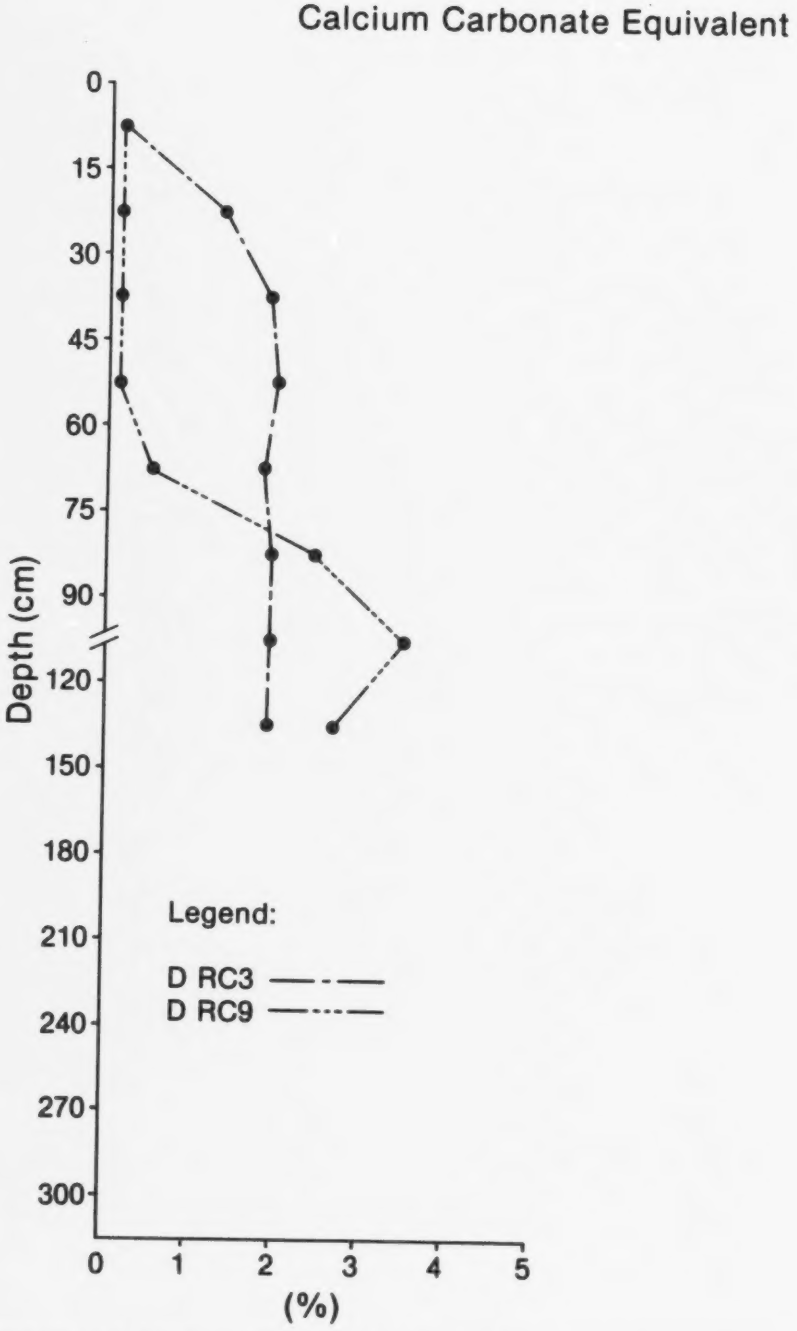


Figure 19. Mean values for Calcium Carbonate Equivalent at Diplomat Mine

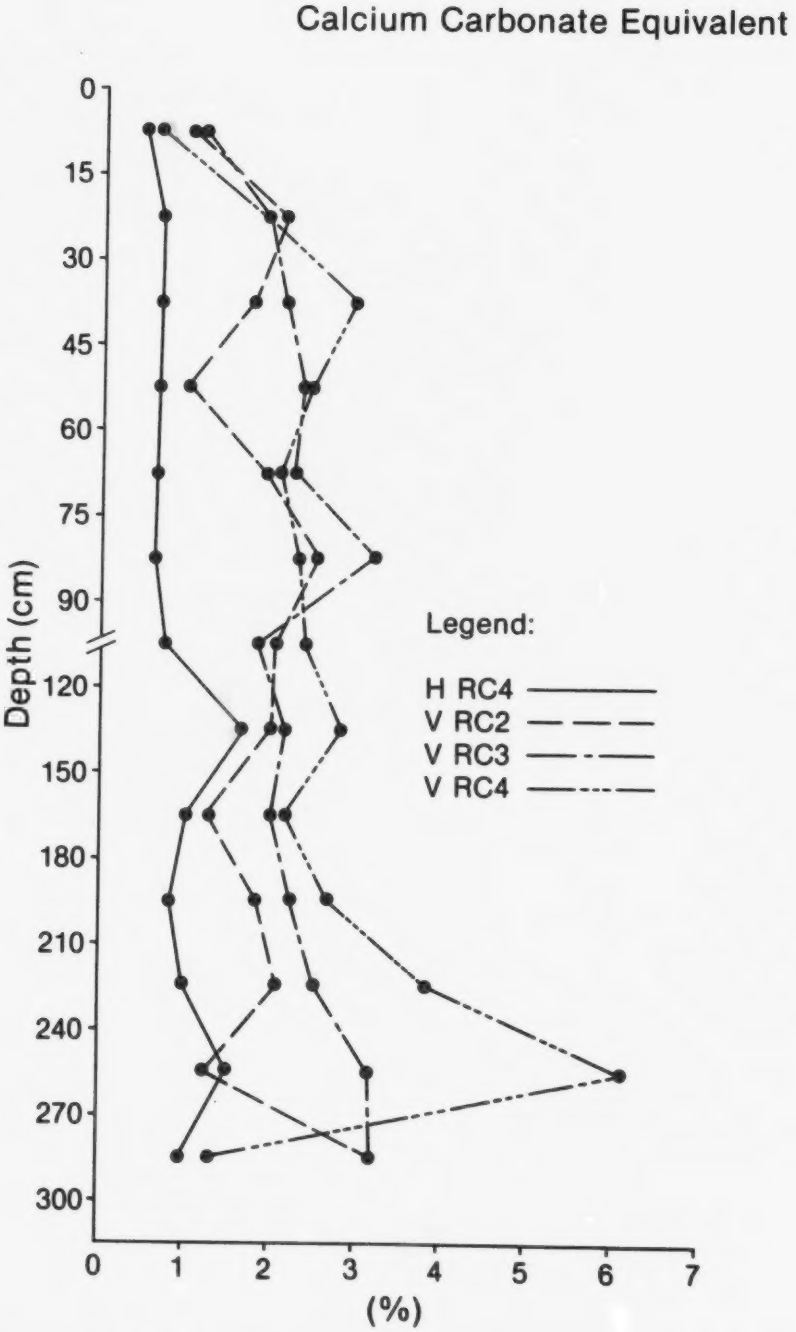


Figure 20. Mean values for Calcium Carbonate Equivalent at Vesta and Highvale Mines

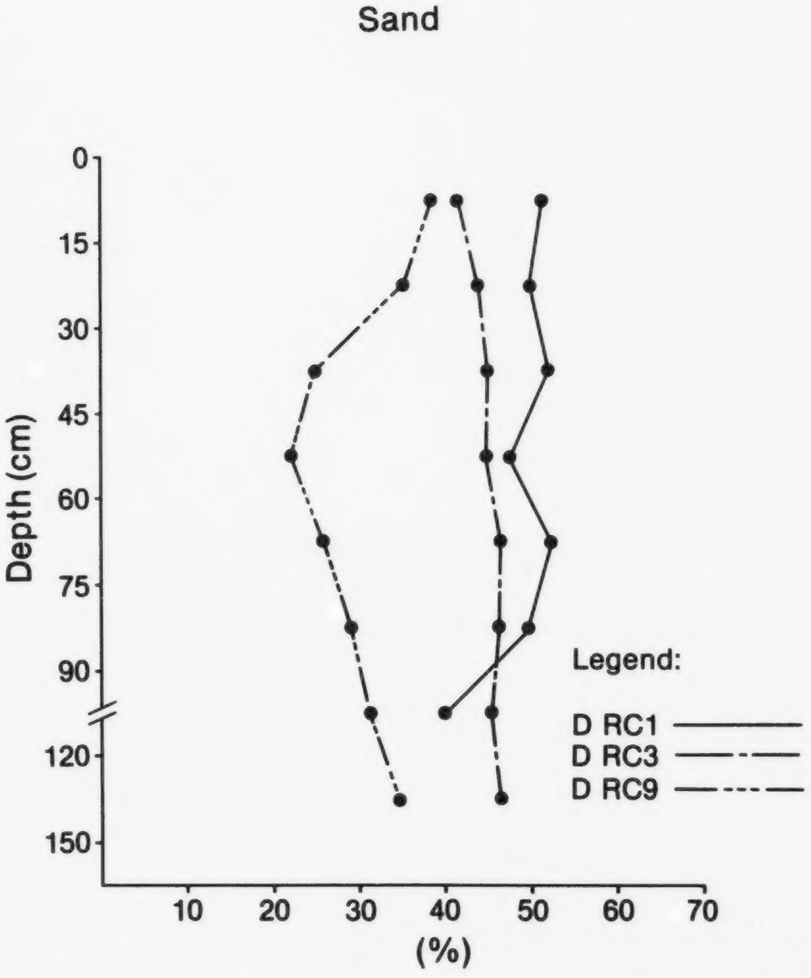


Figure 21. Mean values for Sand at Diplomat Mine

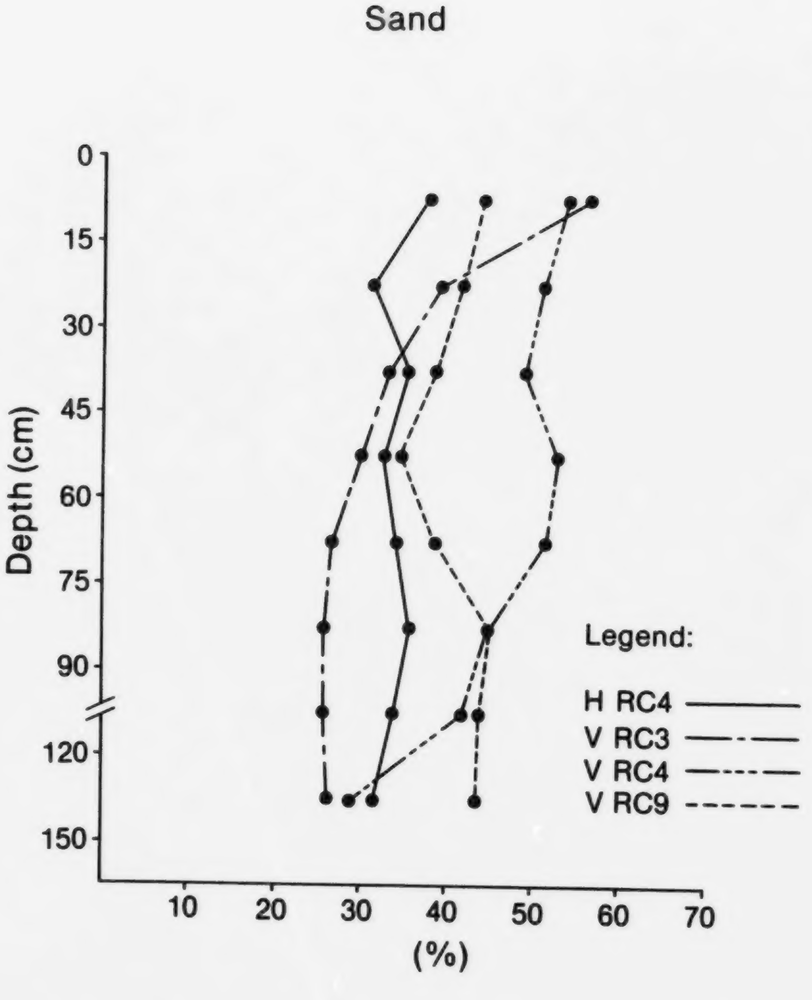


Figure 22. Mean values for Sand at Highvale and Vesta Mines

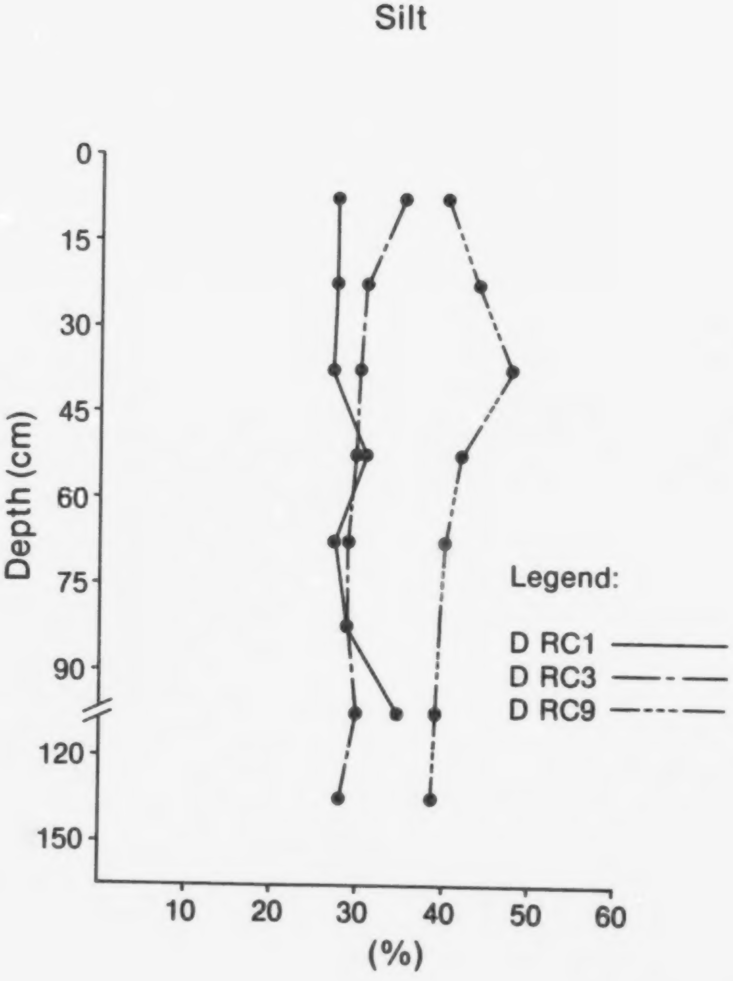


Figure 23. Mean values for Silt at Diplomat Mine

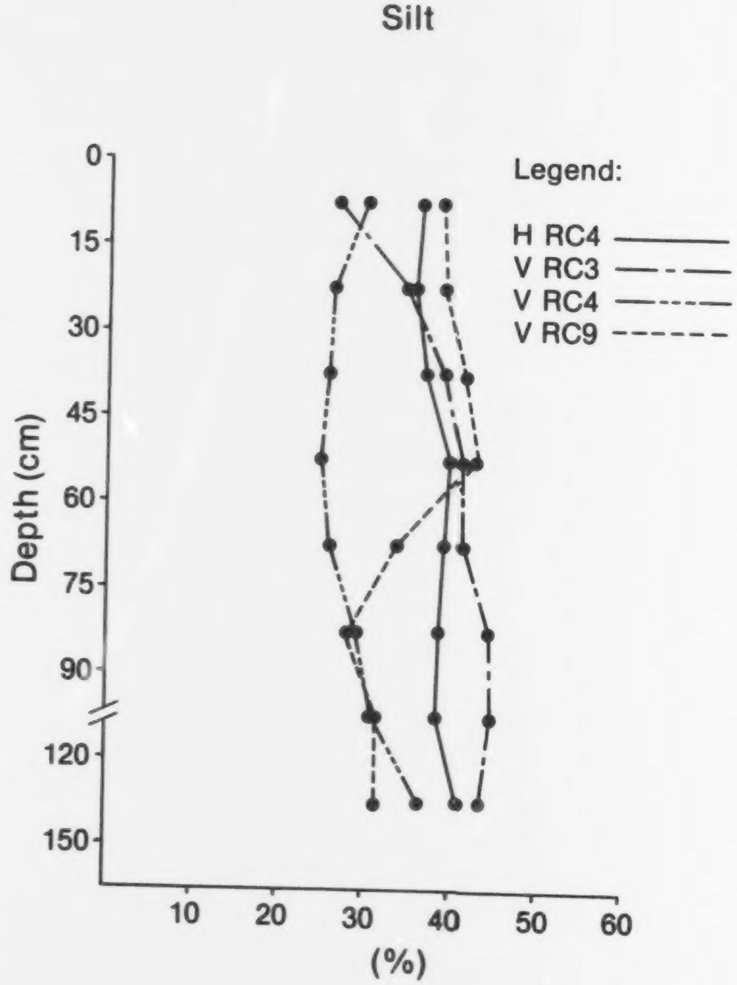


Figure 24. Mean values for Silt at Highvale and Vesta Mines

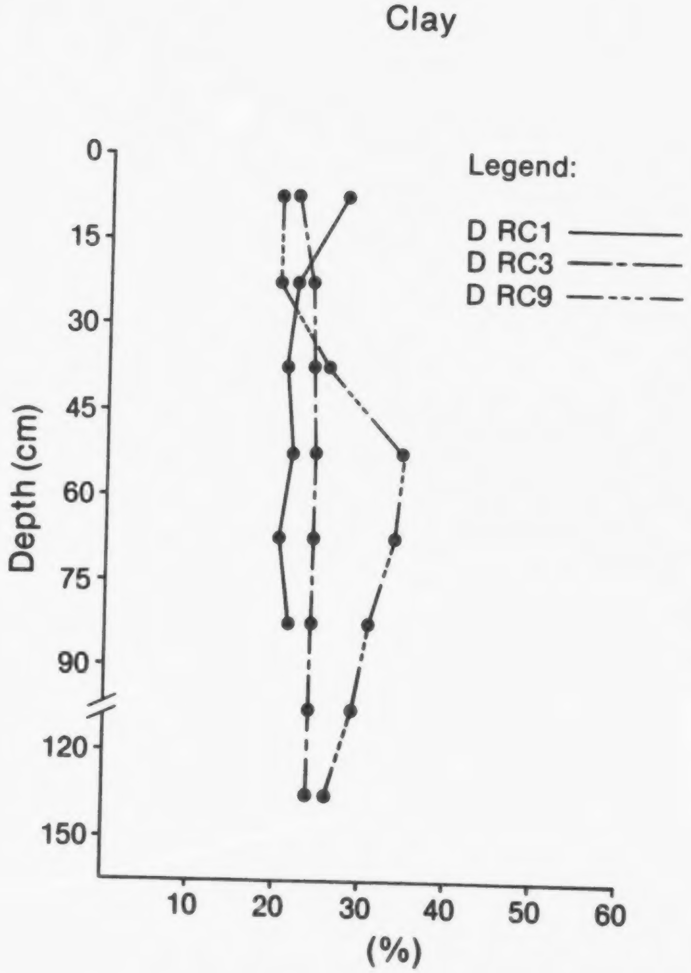


Figure 25. Mean values for Clay at Diplomat Mine

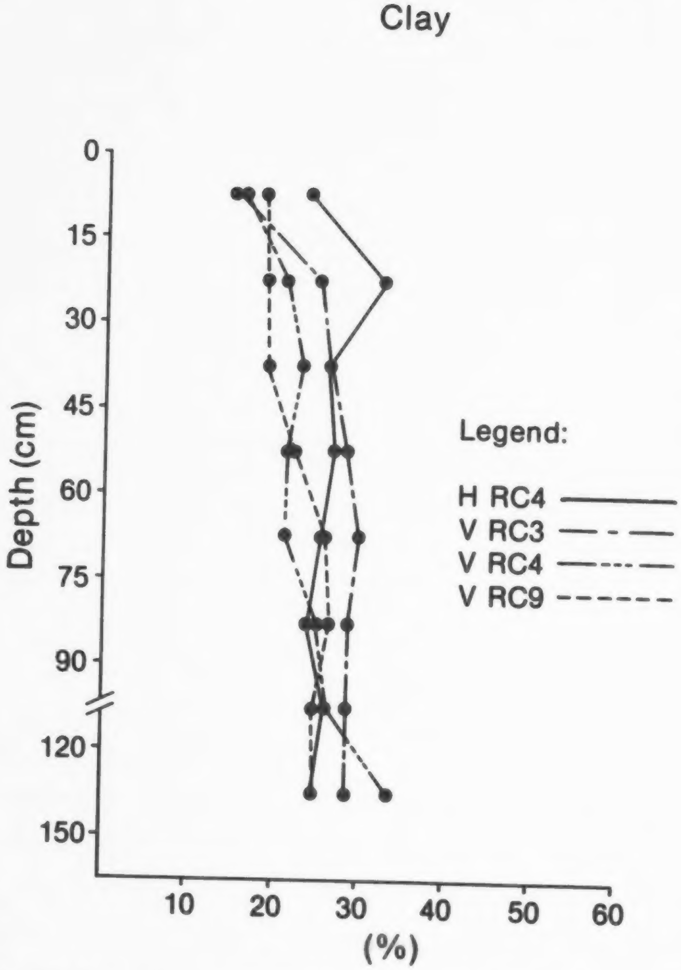


Figure 26. Mean values for Clay at Highvale and Vesta Mines

2.4.2 RC2 Areas

RC2 areas include locations where the spoil piles were levelled prior to revegetation. A relatively large number of sites was sampled at Diplomat (25) as compared with Vesta (5) because of the respective areal distribution of this materials handling procedure. At the time of sampling a significant portion of the spoil materials at Vesta was in the process of being levelled, thereby precluding any extensive sampling activity.

A significant portion of reclaimed land at Diplomat is characterized or mapped as RC2. The extent of levelling varied, resulting in topography ranging from level to gently undulating to rolling.

The data and figures provided suggest that the RC2 areas in general have the least desirable reconstructed soil characteristics of all procedures used at Diplomat Mine. Comparisons with the RC1 materials were provided previously and there appear to be substantial differences between the RC2 and RC3 areas. This is a bit puzzling in the sense that the only real difference between an RC2 and RC3 area is the presence or absence of topsoil. Otherwise, one would expect relatively similar characteristics below the surface layers or horizons. The reason for the difference observed likely relates to the superiority of the pre-mining materials characteristic of the present RC3 areas compared with the pre-mining materials characteristic of the present RC2 areas.

The values for pH are 1.0 to 1.8 units higher for the RC2 as compared with RC3 sites. The largest difference occurs in the surface (0 to 15 cm) horizon or layer which is most critical to plant establishment and growth. Electrical conductivity is about 25% or 1 dS/m higher for the RC2 sites and, again, the largest difference (1 dS/m vs 3.8 dS/m) occurs in the most critical layer - the surface material. Sodium adsorption ratio is also consistently and considerably higher for the RC2 than the RC3 sites. Similarly, PSAT is lower at the RC3 sites than at RC2 sites.

At Vesta Mine, similar relationships are apparent only for PSAT and SAR. Figures 4 and 6 provide interesting examples of how utilization of the subsoil layer improves the chemistry of reconstructed soils. The pH values are relatively similar to RC3 and RC4 values, whereas EC levels for RC2 sites are lower except for the surface (0 to 15 cm) layers.

Overall, it can be stated that the RC2 sites are not as suitable as RC3 or RC4 sites for revegetation purposes. The obvious reason relates to the presence or absence of the topsoil layer as well as some differences evident in the materials below the topsoil.

2.4.3 RC3 and RC4 Areas

RC3 and RC4 areas include locations where the spoil piles were levelled and topsoiled prior to revegetation (RC3) and areas where a topsoil/ subsoil/spoil sequence (RC4) occurs. The largest number of sites sampled at Diplomat was obtained in RC3 areas which represent the most advanced materials handling procedure at that mine. Several comments pertinent to RC3 areas were presented earlier in discussion of other reconstructed soil types; however, additional comments can be made.

At Diplomat Mine, the RC3 areas are characterized by level to undulating topography which implies no or slight limitations due to topography. For Diplomat, the major comparison of RC3 areas is to undisturbed sites. In terms of pH there is a rather substantial difference in the upper 75 cm of material where the undisturbed sites have pH's of 0.5 to 1.2 units lower than RC3 sites. In fact, the pH of the surface material or topsoil of the reconstructed material is better for plant establishment and growth than is the natural soil which tends to be more acid.

In terms of PSAT and SAR there is very little difference between the RC3 sites and the undisturbed soils.

The electrical conductivity of the levels is very similar for the surface (0 to 15 cm) material but differs somewhat beyond that depth. The electrical conductivity for the RC3 materials increases from approximately 1 dS/m in the topsoil layer to approximately 3 dS/m for the remaining depth sequence to 1.5 m (Figure 7). Clay content is very uniform with depth in the RC3 areas and is lower than in the undisturbed soils except for the upper 30 cm. Sand content is also consistent with depth in the RC3 areas and is higher than sand content of the undisturbed soils. Silt content is consistent with depth in the RC3 areas and is lower than in undisturbed soils.

Sulphate content is consistently higher in the reconstructed (RC3) soils. Carbonate content in the reconstructed material is higher than the undisturbed soils down to 75 cm depth but beyond that depth the reverse is true. This is what one would expect since the parent material is likely to occur at approximately 75 cm or greater in undisturbed soils.

Sodium content is similar in the topsoil of the reconstructed (RC3) and undisturbed soils, and is higher in the reconstructed soil with depth.

Comparisons can be made of the RC3 and RC4 areas and the undisturbed soils at the Vesta Mine. The RC4 areas are characterized by a topsoil/subsoil/spoil sequence of materials. References to the RC3 and RC4 have already been made in discussion pertinent to RC2 areas. The data (Figures 2, 4, and 6) indicate a definite improvement in quality in terms of PSAT and SAR and, to some extent, pH for RC3 and RC4 areas as compared with RC2 areas. Furthermore, the RC4 values are similar to the undisturbed soils values for the above-mentioned parameters. Calcium carbonate and clay content are relatively similar for the various materials handling procedures at Vesta Mine.

As mentioned previously, the data for Highvale Mine are presented in the appendices and some are presented graphically in Figures 1 to 26. Emphasis was placed on sampling RC4 areas, thereby precluding any data comparisons with other areas.

2.4.4 RC5 Areas

RC5 areas include locations where ash was placed over levelled spoil. A very limited number of samples were obtained from RC5 areas simply because this treatment does not involve a significantly large area in total, and trafficability problems affected the sampling program. The comments presented herein relate to observations made at Vesta Mine. Presence of the ash layer resulted in considerably lower values at the 0 to 15 cm depth for EC, SAR and PSAT in comparison with RC2 areas. Field observations indicated that plant growth was better in the RC5 areas as compared with RC2 areas. This can be attributed to the chemical properties associated with the surface layer and also the fact that moisture availability appeared better in the RC5 areas. Erosion of the ash layer was observed in areas of rolling topography; however, the trafficability problem remains one of the major limitations to agriculture in RC5 areas.

2.4.5 RC6 Areas

RC6 areas include locations where levelling of spoil piles was very recently completed or still in progress. These areas were not sampled because in some cases it was obvious that topsoiling and/or subsoiling was yet to follow and, furthermore, that these areas are similar to RC2 areas which were sampled to some extent. This unit was recognized primarily to serve a cartographic need.

2.4.6 RC7 Areas

RC7 areas include locations where seasonal ponding occurs. These areas were not sampled because of the limitation to access imposed by wetness.

2.4.7 RC8 Areas

RC8 areas include locations where the land surface was disturbed and manipulated but actual mining did not occur. Sampling of these areas was not undertaken. Field observations indicate that some mixing occurred in the surface layers but that these soil areas would not differ significantly from unmined or natural soils. In most instances the B horizons were unchanged.

2.4.8 RC9 Areas

RC9 areas involve undisturbed soils. Sampling of a range of undisturbed soils at each of the Vesta and Diplomat sites was undertaken.

2.5 SUMMARY OF RECONSTRUCTED SOIL AREA CHARACTERISTICS

Based on the aforementioned observations and conclusions some summary statements can be presented which are pertinent primarily to the Battle River site.

1. RC1 areas were evaluated only at the Diplomat site and, furthermore, to a very limited extent. It is apparent that "quality" of the materials in these areas is similar to and, in some instances, superior to the materials found in the RC2 or levelled areas. The major concerns associated with these areas relate to landscape features and associated processes. The absence of a topsoil layer is a concern but the slope characteristics are even more of a concern relative to erosion.
2. RC2 areas were investigated most intensively at the Diplomat site. In general, the data indicate that reconstructed soils within the RC2 areas are inferior to the other reconstructed soil areas when one considers parameters such as PSAT, EC, SAR and pH. One of the obvious differences relates to the presence or absence of the replaced topsoil layer. The RC2 areas do not have replaced topsoil layers; however, field observations indicate that cropping (primarily forage crops) is resulting in improved surface material characteristics.
3. The data for RC3 areas at Diplomat Mine suggest that the quality of the reconstructed soils is relatively comparable to adjacent undisturbed soils. An obvious conclusion is that the chemical properties of the Ah or topsoil materials are not degraded by mining. In fact, a positive result is indicated in that the topsoil of reconstructed soils is less acid or nearer to neutral than undisturbed soils. Below the topsoil layer some differences occur in various parameters. There is very little difference between the RC3 reconstructed soils and undisturbed soils in critical parameters such as

PSAT and SAR. However, EC is definitely higher below the topsoil layer in reconstructed soils.

4. At Vesta Mine, the importance of materials management is demonstrated whereby subsoiling is required to re-establish soil properties similar to the undisturbed soils. This is a reflection of the surficial materials indigenous to the area. As was evident at Diplomat, there is very little difference between the RC4 reconstructed soils and undisturbed soils in terms of PSAT and SAR. It should be noted further that there is a substantial difference in PSAT and SAR between the subsoiled and not subsoiled areas.
5. The placement of ash on the levelled spoil surface (RC5 areas) at Vesta has positive effects on plant establishment, etc. The major problem associated with the procedure is the resultant difficulty with trafficability or utilization of agricultural equipment.

3. VARIABILITY OF RECONSTRUCTED SOILS

It can be suggested that climate, organisms and relief have had too little time to significantly influence soil development or soil properties in reclaimed areas. Therefore, reconstructed soil properties are determined largely by parent material characteristics and are further tempered by materials handling procedures. Regardless of the degree or extent of materials handling involved, the operation tends to intimately mix materials within the various parts of the "overburden column". For example, when topsoil is removed mixing occurs some lateral distance. If it is stockpiled rather than directly replaced there is the potential for even more mixing to occur. Similarly, in the subsoiling process, mixing of the solum vertically (from immediately below topsoil layer and above parent material) as well as horizontally across the landscape occurs. The end result is essentially a random mixture of what initially was or would have been identified or mapped as a number of specific soil units. Each of these units (series or associations) would have had a defined range of properties. One can therefore conclude or suggest that locally, reconstructed soils are more variable than natural soils (i.e., one soil series or association as compared to the random mixture of a number of series or associations).

Conversely, over large distances reconstructed soils are less variable than natural soils. In essence, one is comparing the random mixture which characterizes the reconstructed soils to a number of individual or different soil units that have specific defined ranges of properties. For example, prior to mining, an area may be characterized by a diverse range of soil types (i.e., Chernozemic and Solonetzic). If these soils are salvaged randomly and replaced, then one would expect some level of "average" values in the resulting reconstructed soil. Schafer (1982) suggests that mining tends to create a very homogeneous soil landscape in contrast to the mixture of diverse soils found before mining. He also described differences in the pattern of soil variability between mined and unmined landscapes (Schafer 1979).

The concern about the variability of reconstructed soils relates to the needs associated with assessing properties adequately so that pertinent capability interpretations can be made and that responsible use and management decisions can be effected.

During the initial stages of the sampling program undertaken to characterize reconstructed soils, one hole per site was sampled. This raised the concern about how representative one hole is of the immediate (1 to 10 m) surrounding area. In other words, would sampling a metre or two distant result in largely different characteristics. To address this concern, three holes per site or three holes along a transect ranging in length from 3 to 5 m were sampled to provide an indication of the within-site variability as compared with between-site variability.

Figures 27 to 50 graphically illustrate some of the results for electrical conductivity, sodium adsorption ratio, % saturation and pH pertinent to four reconstructed sites (1, 3, 9, and 10) and two undisturbed sites (15 and 16) at Diplomat Mine. Sites 1 and 3 are located approximately 0.5 km distant, as are sites 9 and 10. Furthermore, Sites 1 and 3 are approximately 2 km distant from Sites 9 and 10. Sites 15 and 16 are separated by a distance of approximately 1.5 km.

Similar trends in the data appear relative to EC, SAR and pH. For each parameter it is apparent that values are relatively similar at Sites 1 and 3 and Sites 9 and 10, respectively. The variability between sites 0.5 km distant is less than the variability that occurs between sites 2.0 km distant. Furthermore, the variability between individual digs at a particular site is greater for reconstructed than undisturbed soils.

It is also apparent that the variability with depth for a given parameter is greater in undisturbed than in reconstructed soils. Excellent examples of this are the values shown for pH and PSAT.

The trends for PSAT described above do not necessarily apply. The overall variability in reconstructed soils, regardless of distance involved, is small. It is also apparent that the level of variability between digs at a particular site is similar for reconstructed and undisturbed soils.

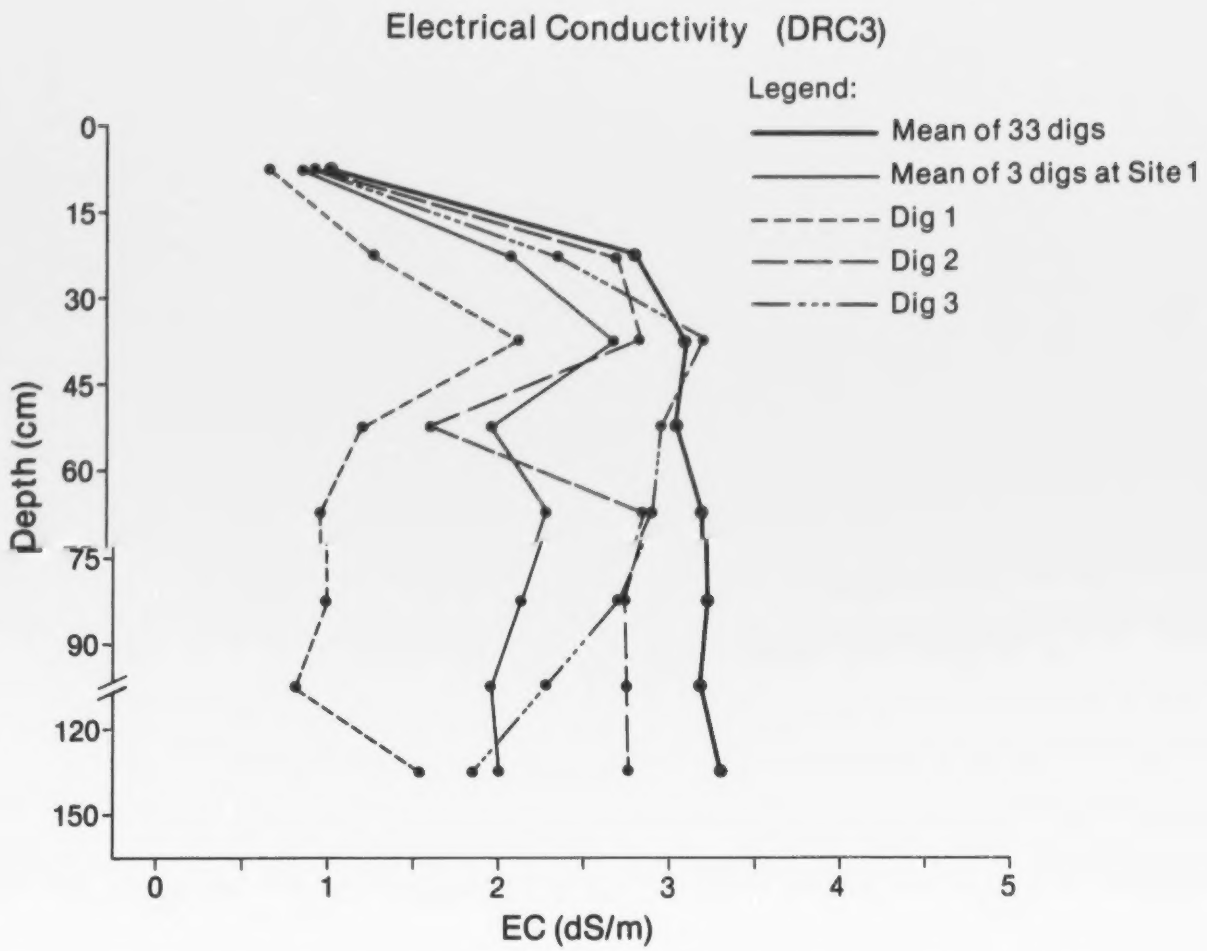


Figure 27. Electrical Conductivity Data for Reconstructed Soils at Diplomat Mine

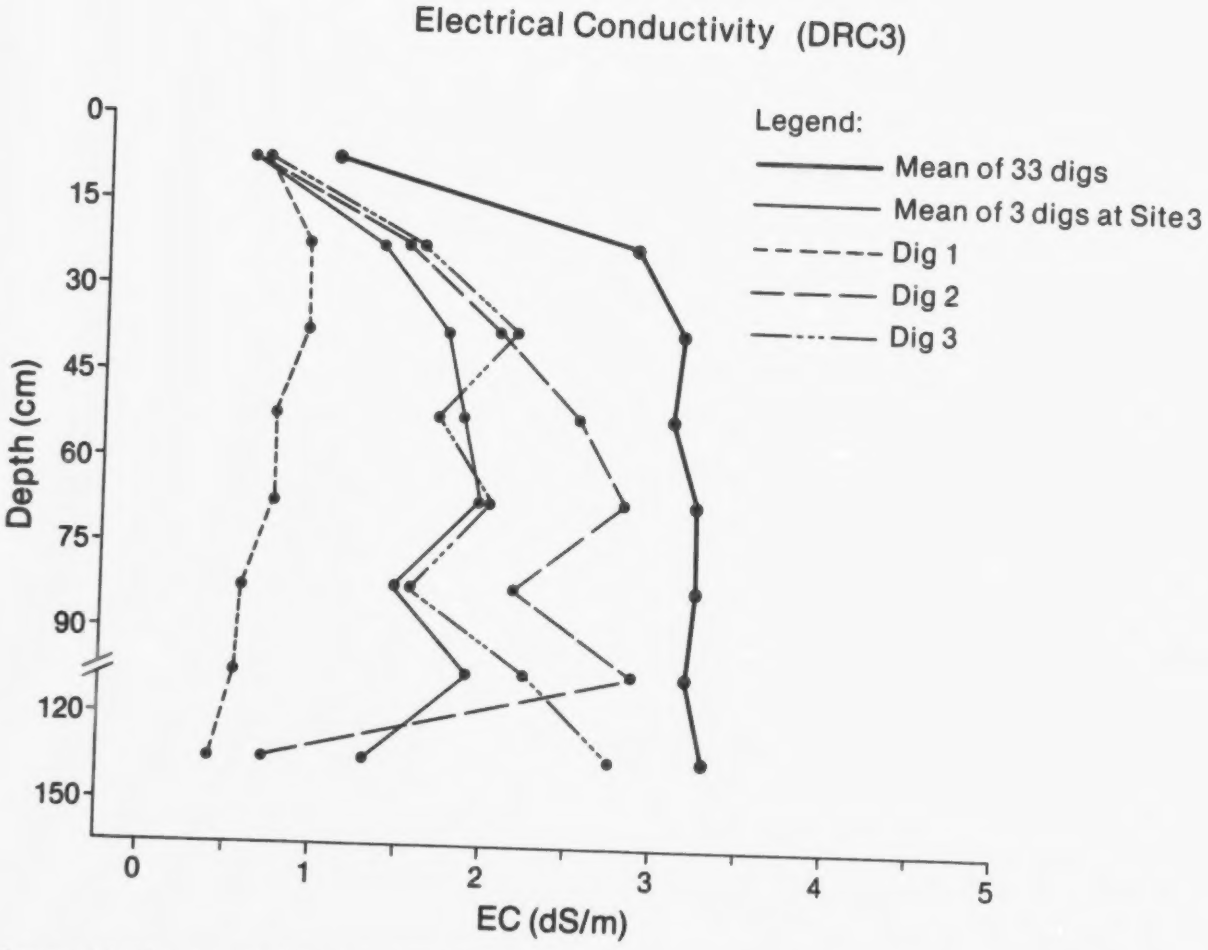


Figure 28. Electrical Conductivity Data for Reconstructed Soils at Diplomat Mines

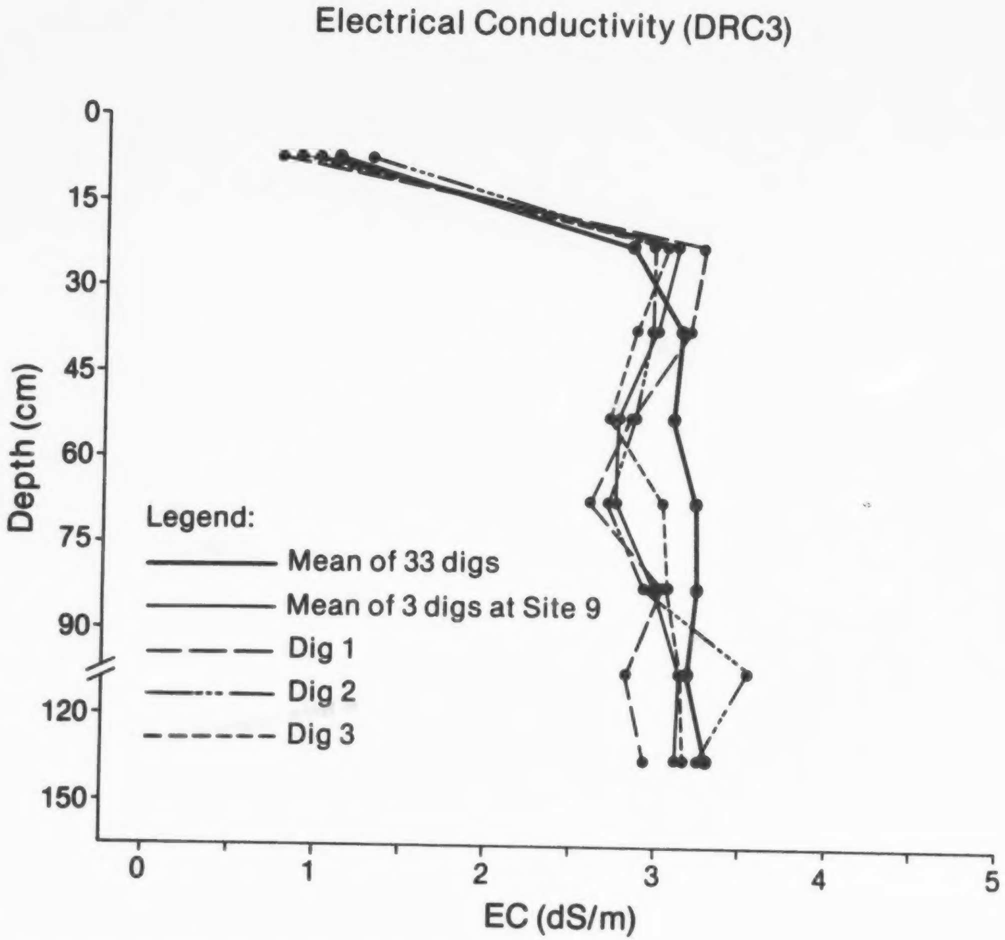


Figure 29. Electrical Conductivity Data for Reconstructed Soils at Diplomat Mines

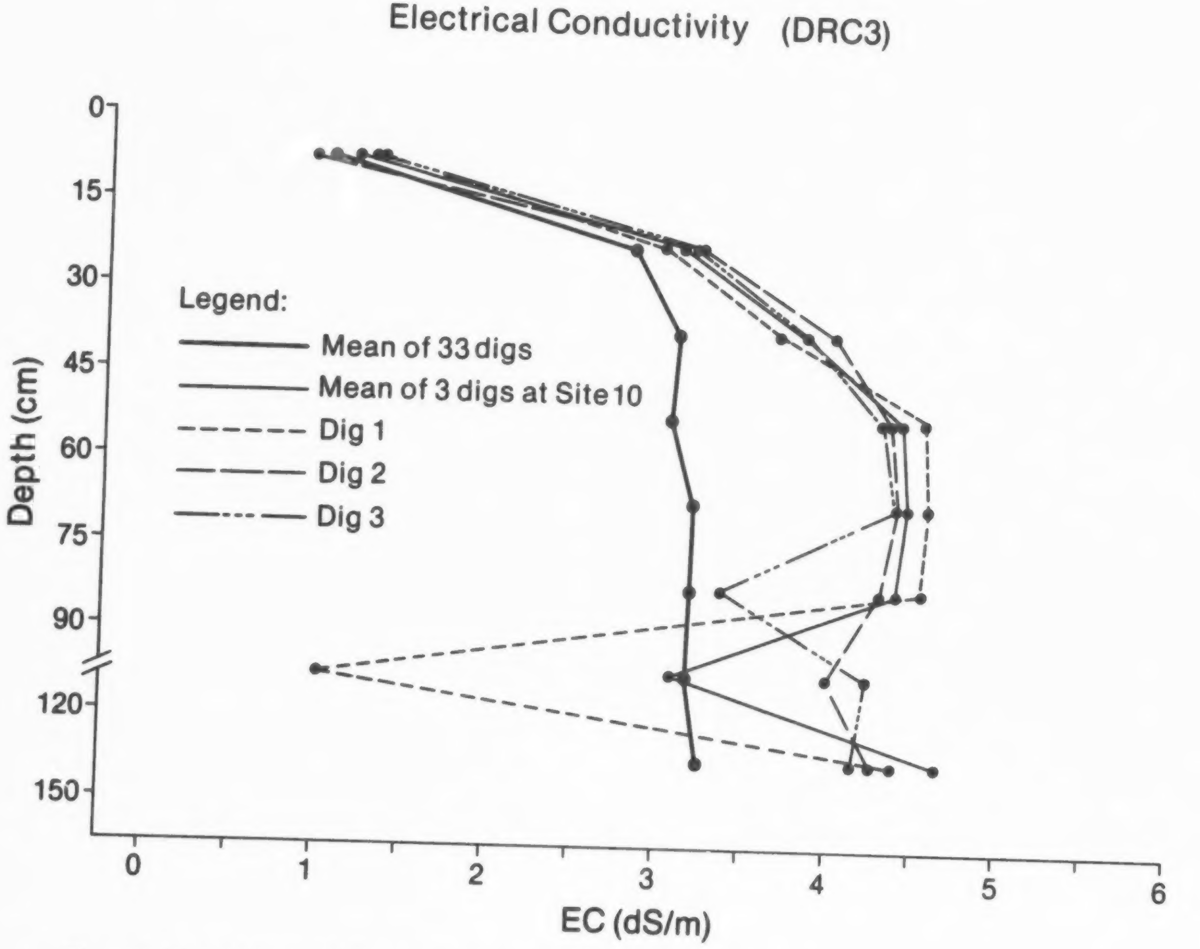


Figure 30. Electrical Conductivity Data for Reconstructed Soils at Diplomat Mines

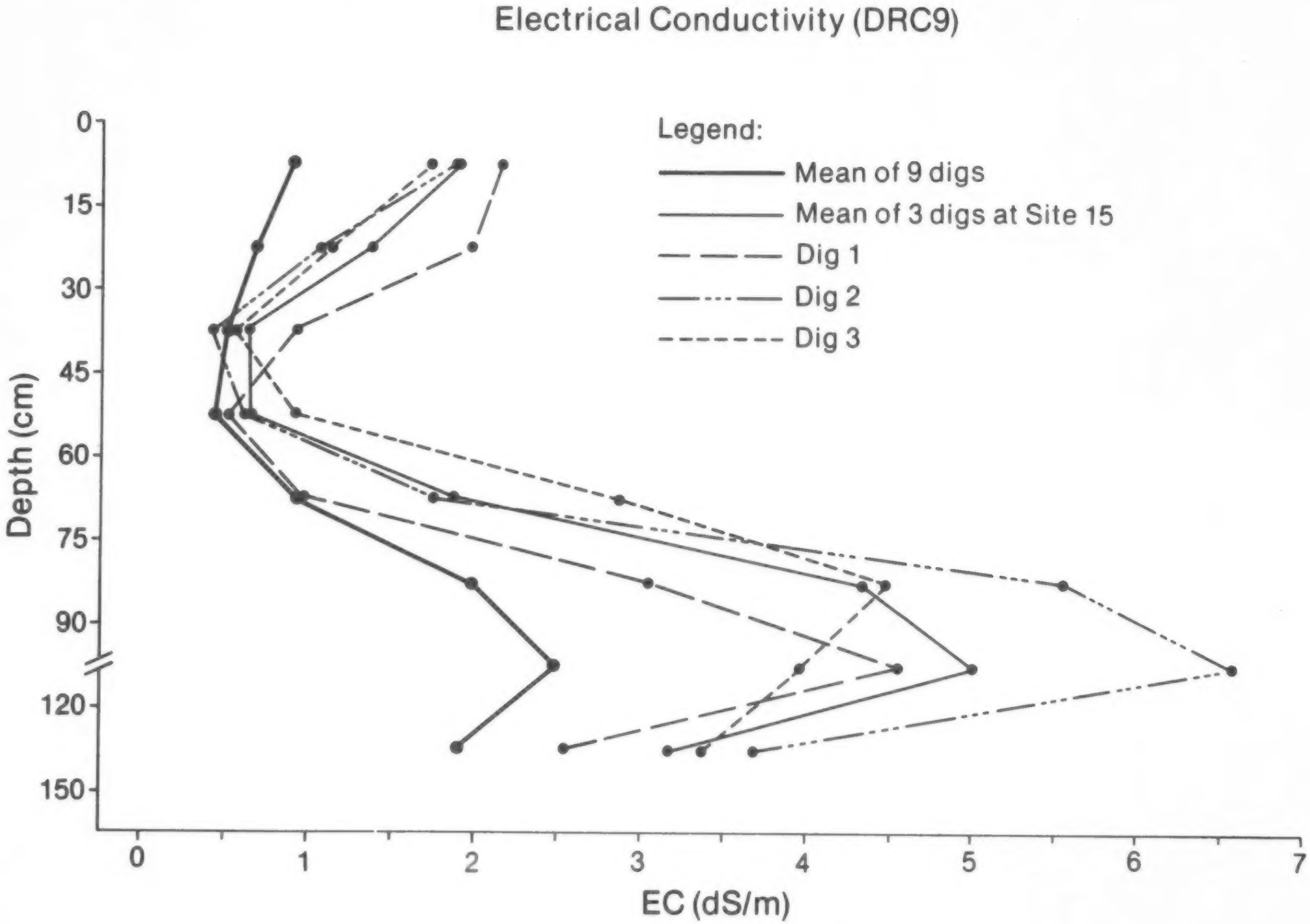

Electrical Conductivity (DRC9)

Figure 31. Electrical Conductivity Data for Undisturbed Soils at Diplomat Mines

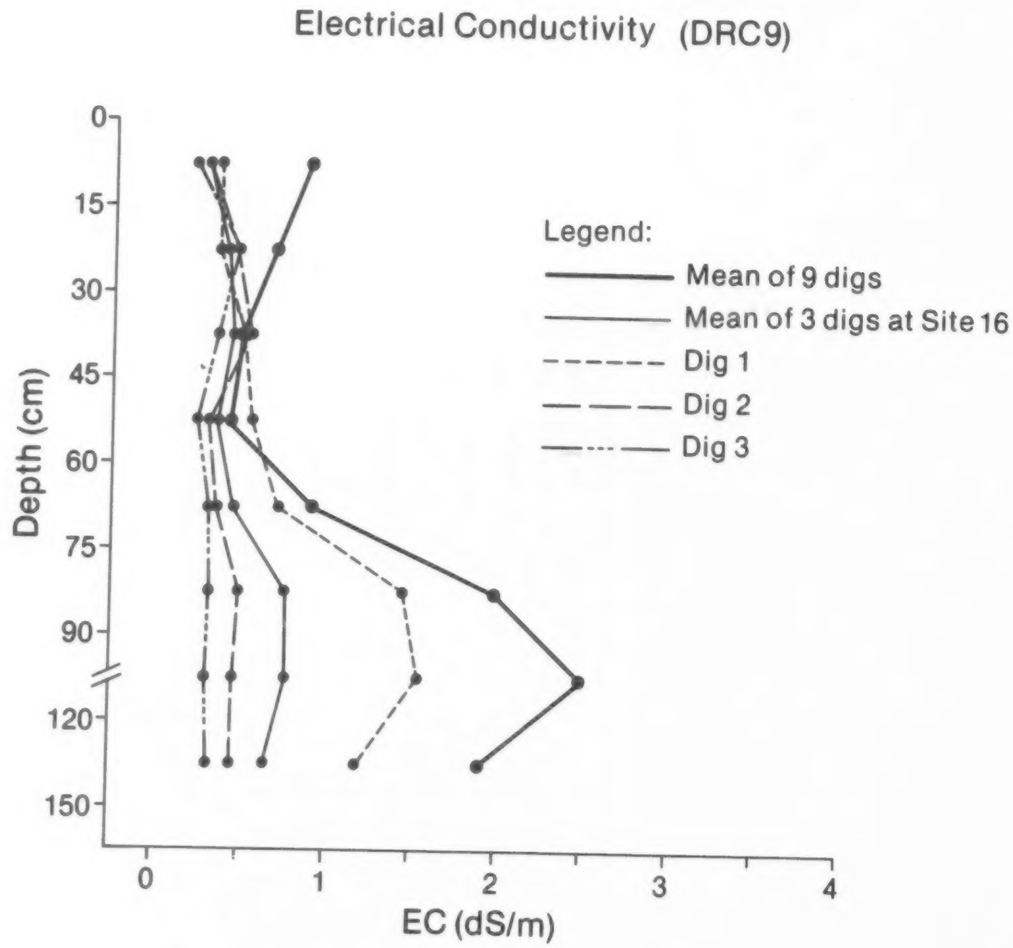


Figure 32. Electrical Conductivity Data for Undisturbed Soils at Diplomat Mines

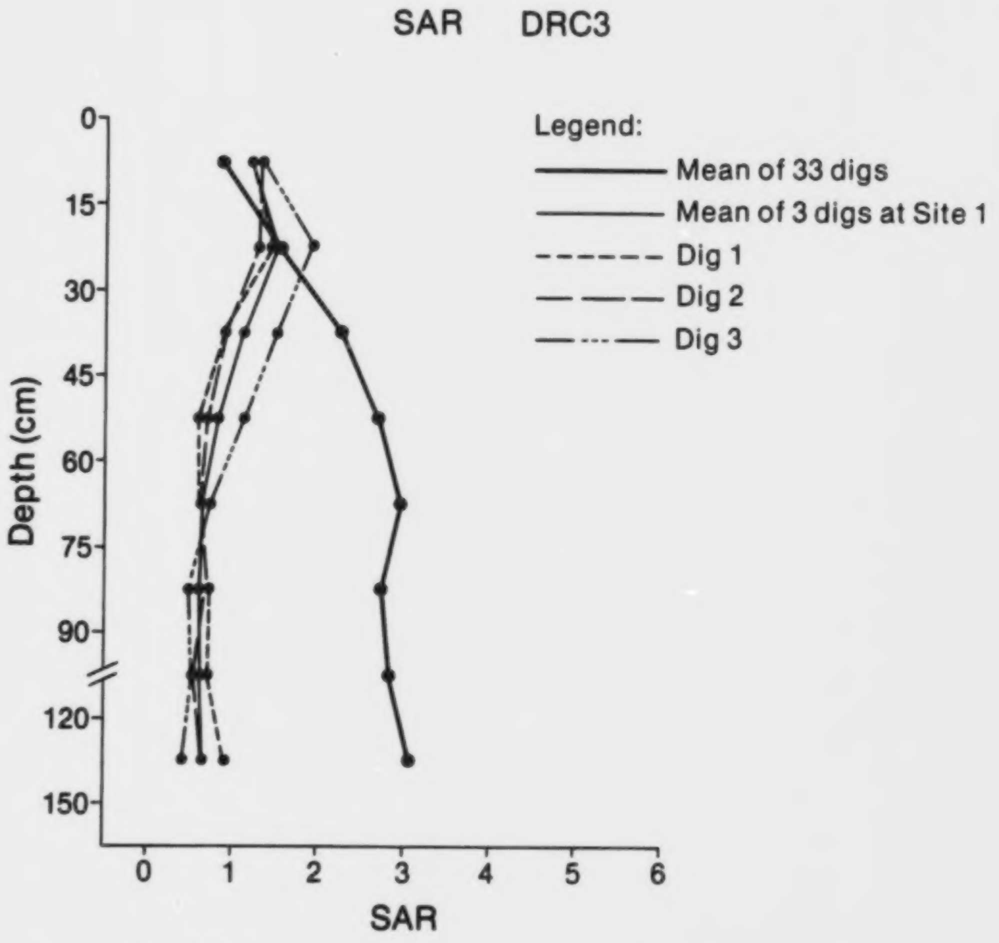


Figure 33. SAR Data for Reconstructed Soils at Diplomat Mine

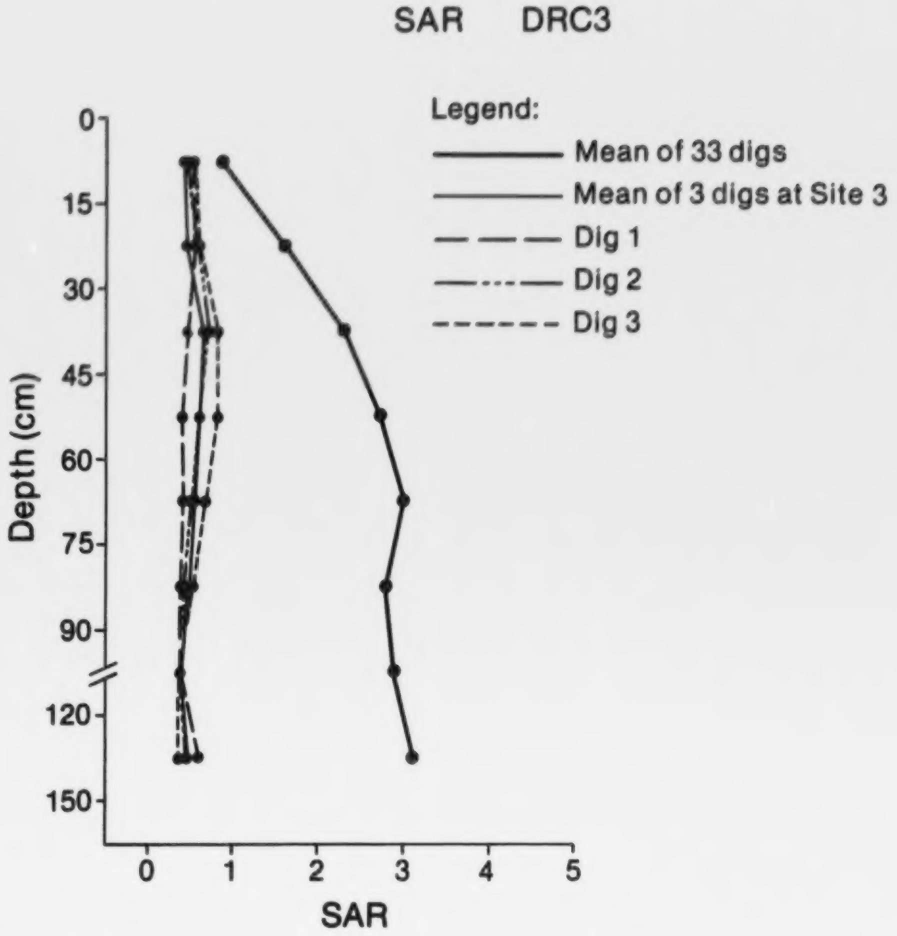


Figure 34. SAR Data for Reconstructed Soils at Diplomat Mine

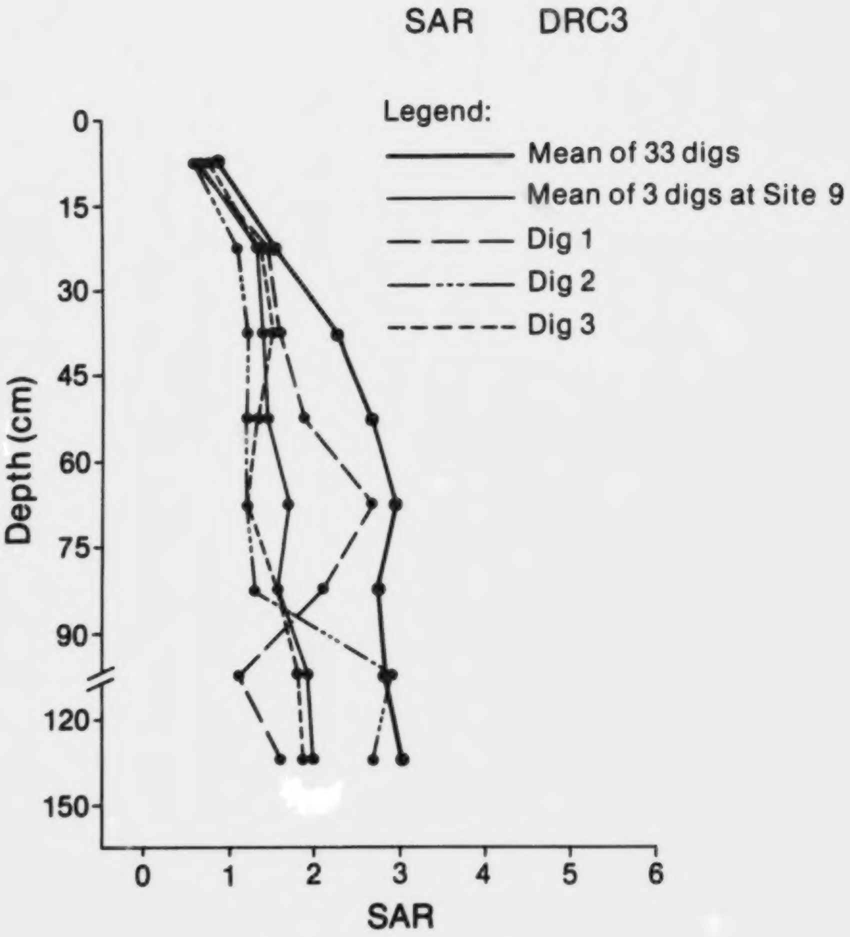
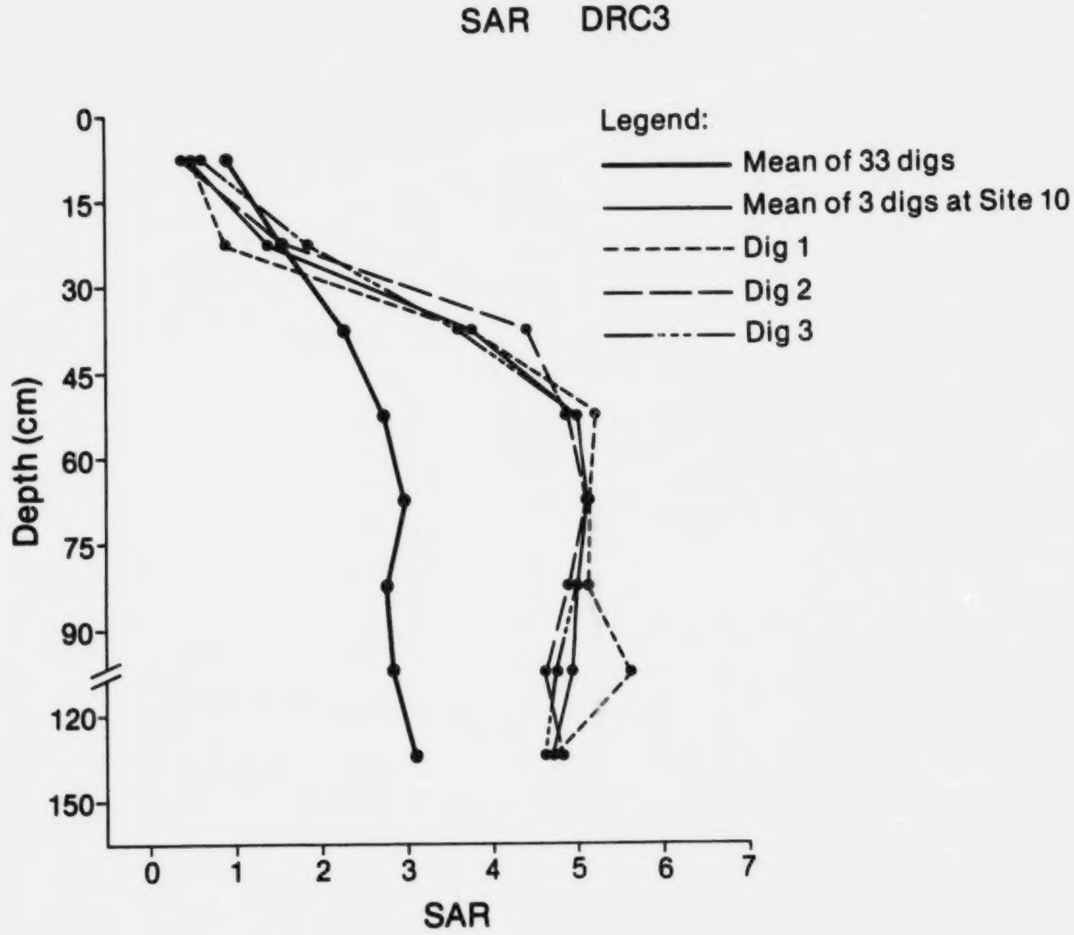


Figure 35. SAR Data for Reconstructed Soils at Diplomat Mine



SAR DRC3

Figure 36. SAR Data for Reconstructed Soils at Diplomat Mine

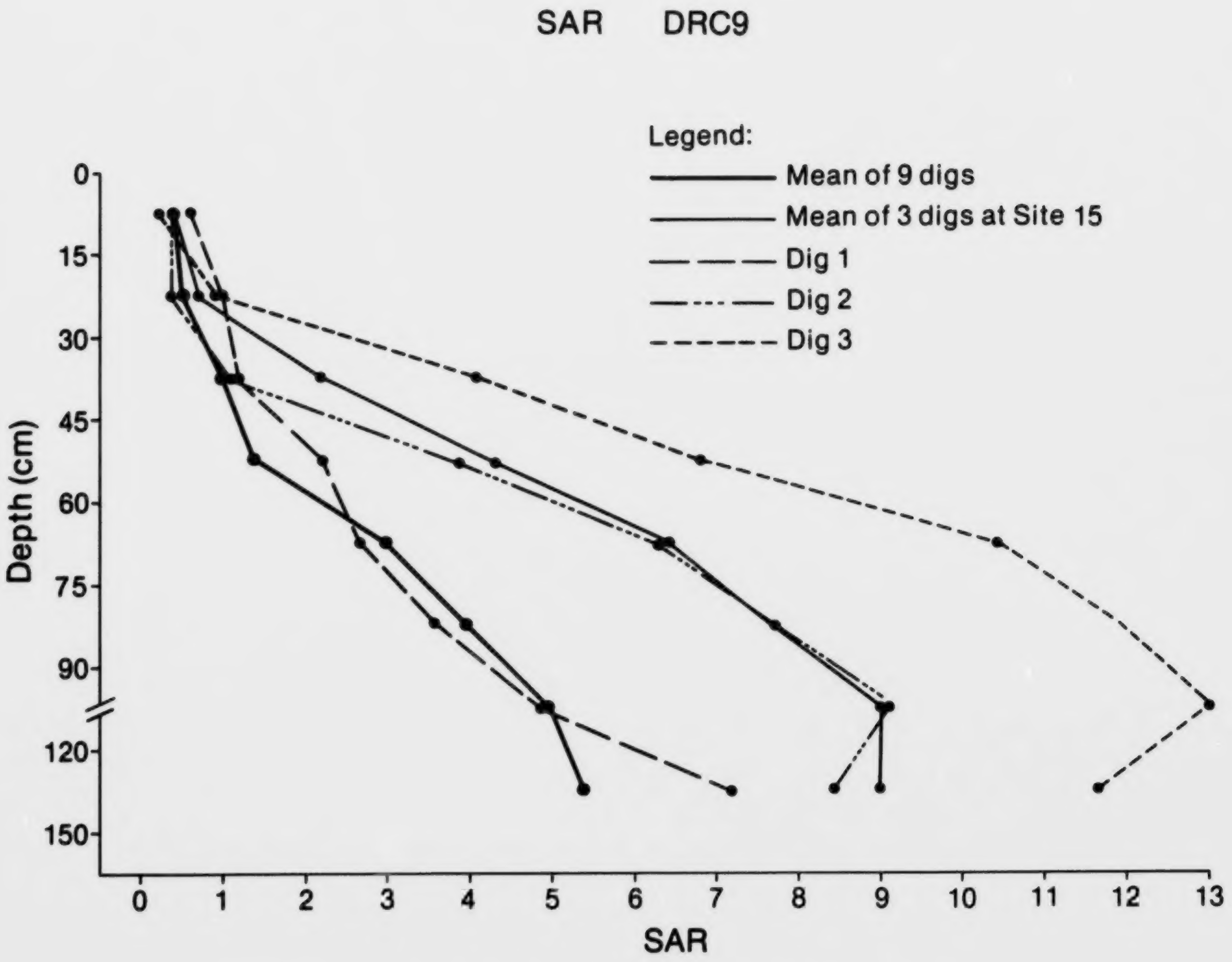


Figure 37. SAR Data for Undisturbed Soils at Diplomat Mine

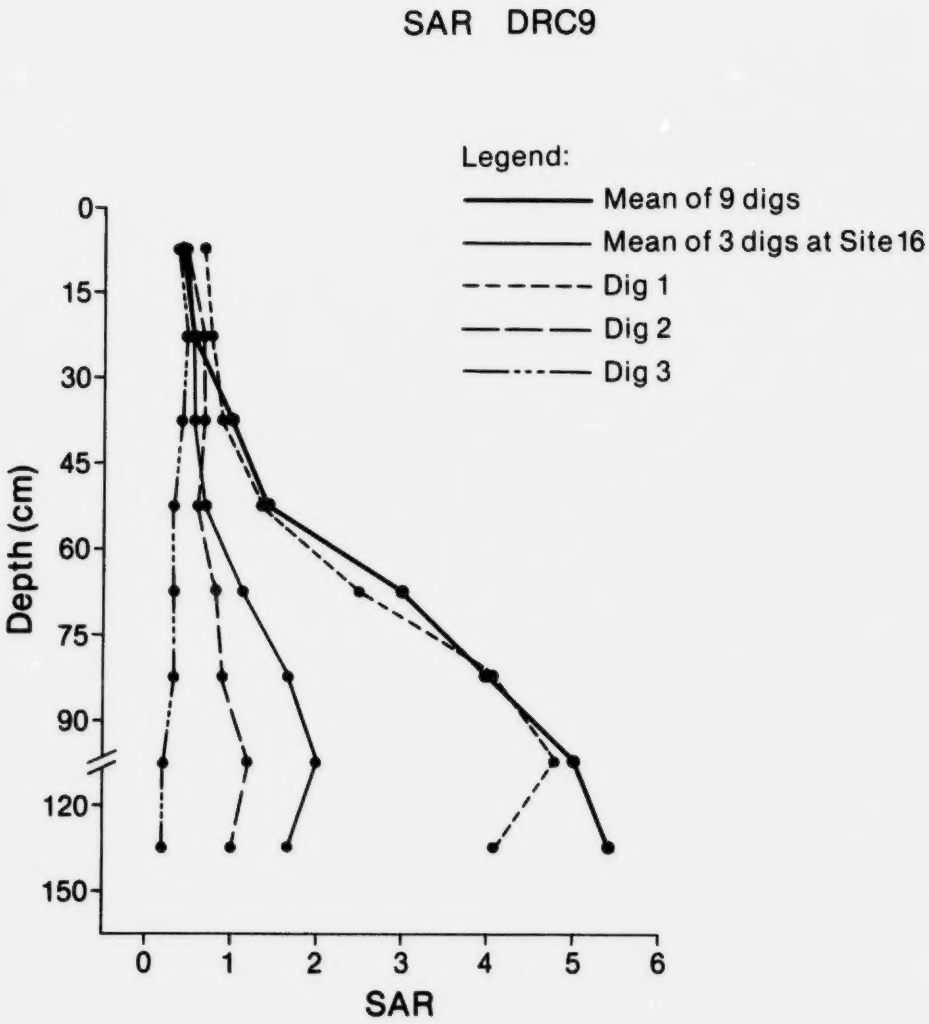


Figure 38. SAR Data for Undisturbed Soils at Diplomat Mine

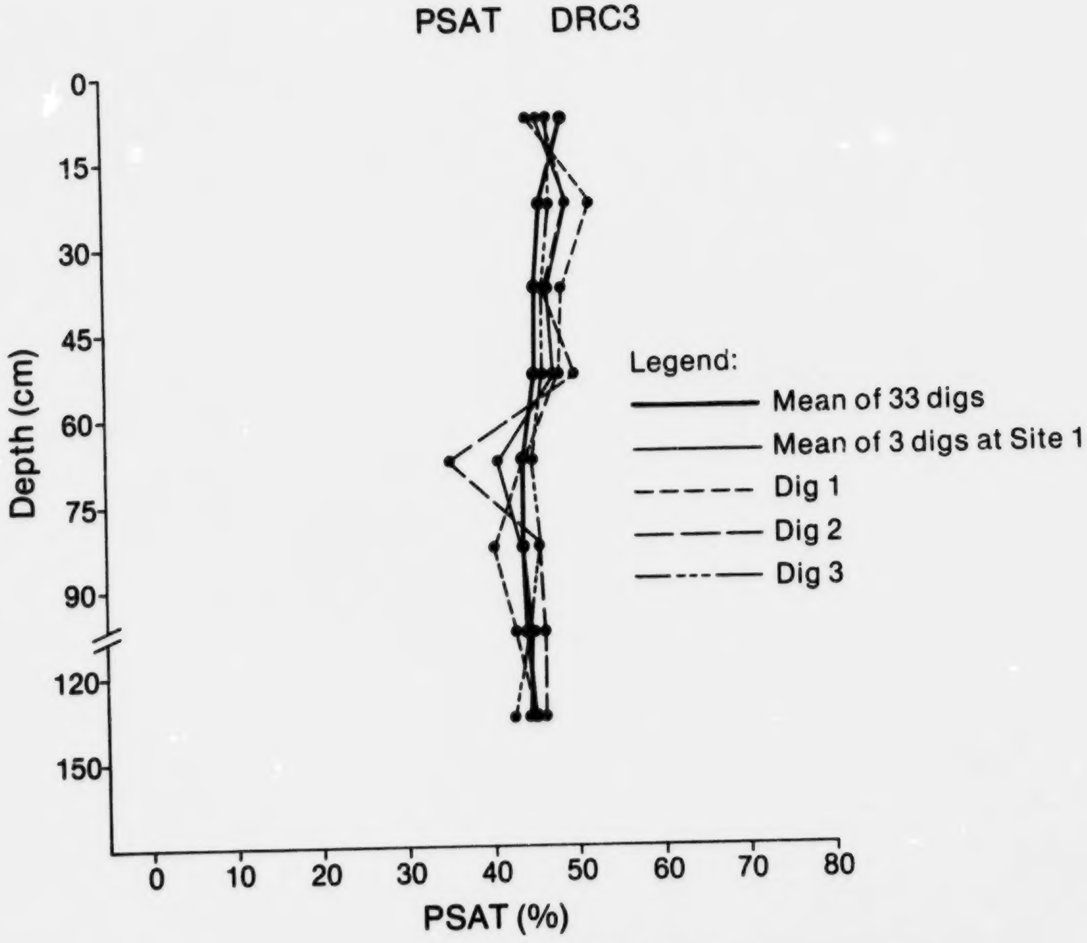


Figure 39. PSAT Data for Reconstructed Soils at Diplomat Mine

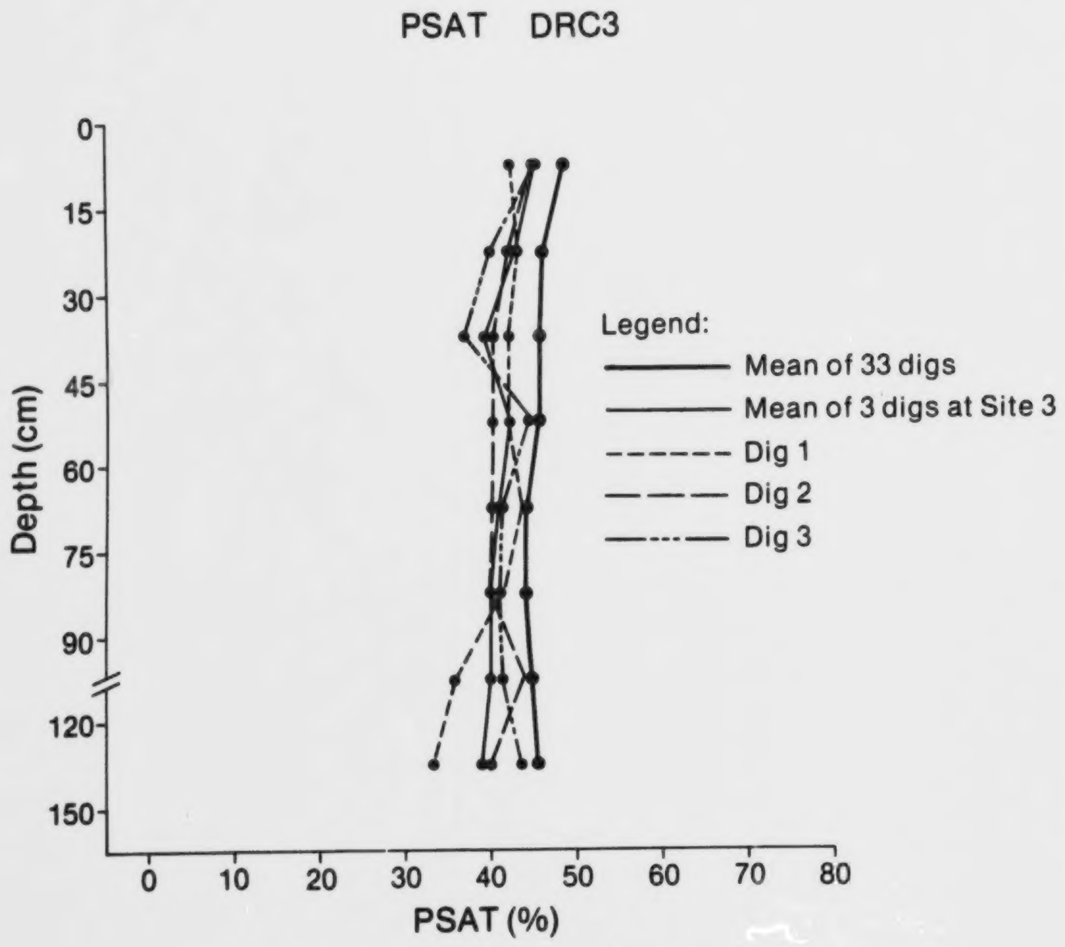


Figure 40. PSAT Data for Reconstructed Soils at Diplomat Mine

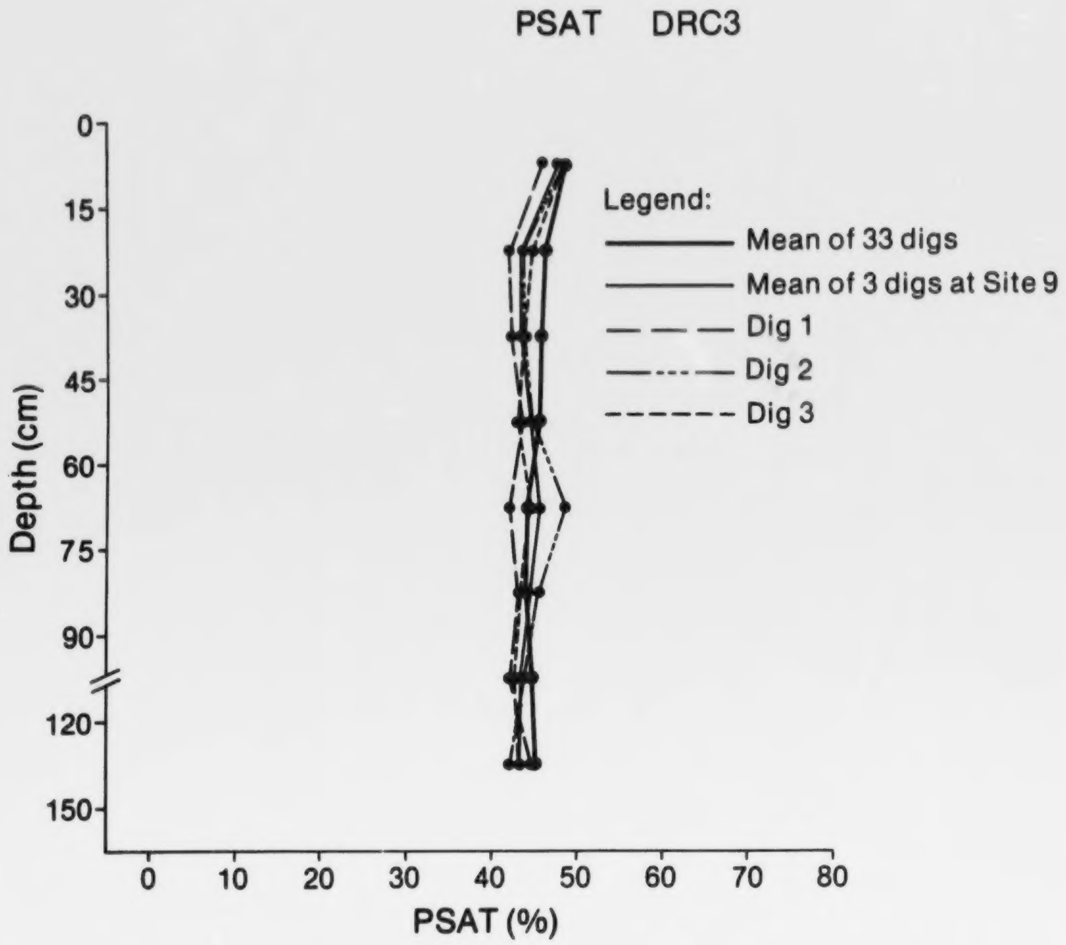


Figure 41. PSAT Data for Reconstructed Soils at Diplomat Mine

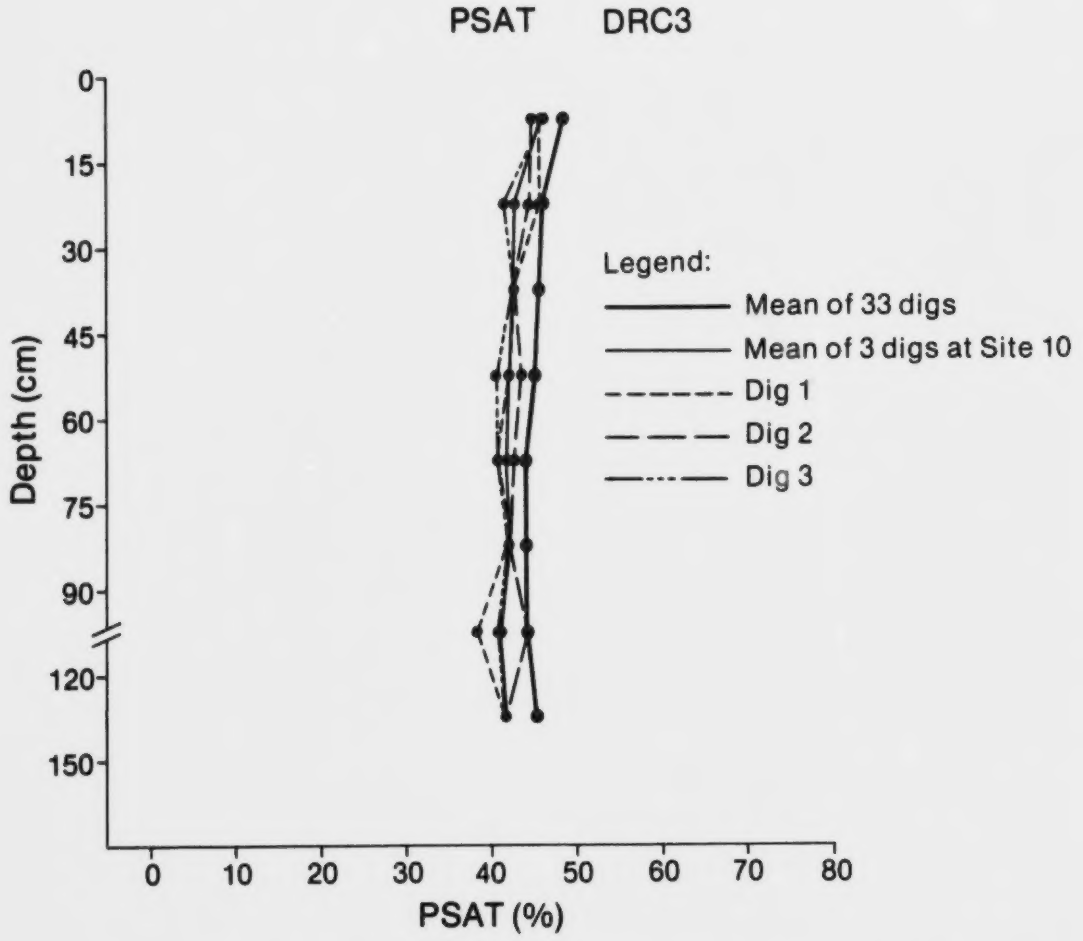


Figure 42. PSAT Data for Reconstructed Soils at Diplomat Mine

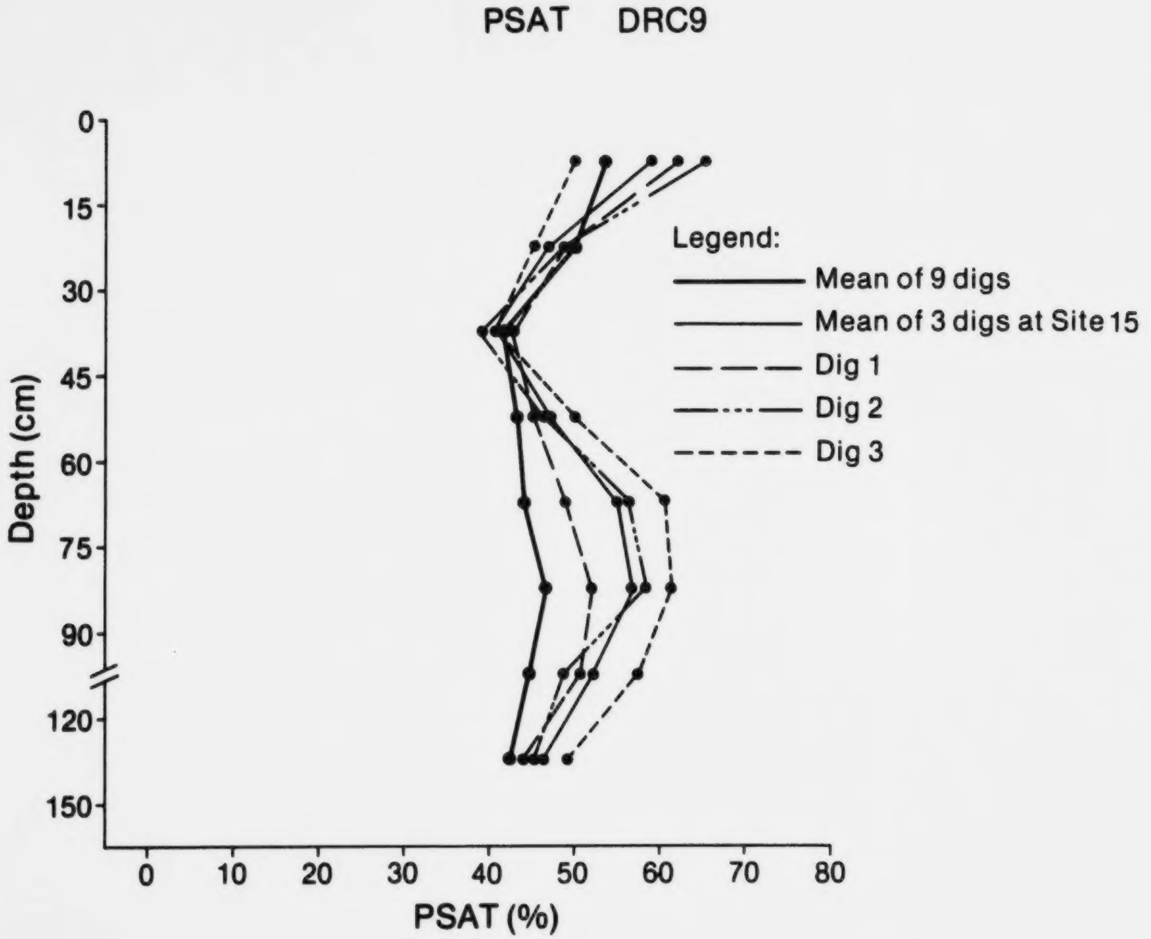


Figure 43. PSAT Data for Undisturbed Soils at Diplomat Mine

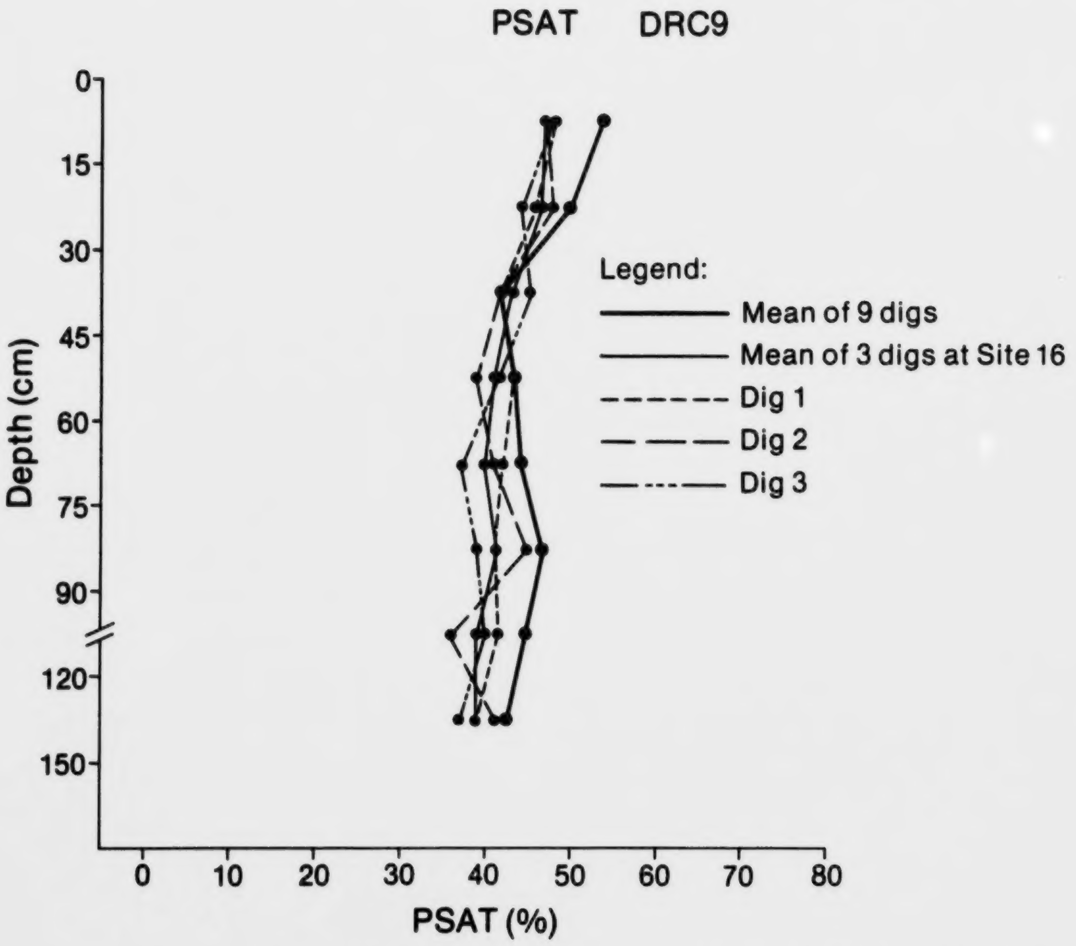


Figure 44. PSAT Data for Undisturbed Soils at Diplomat Mine

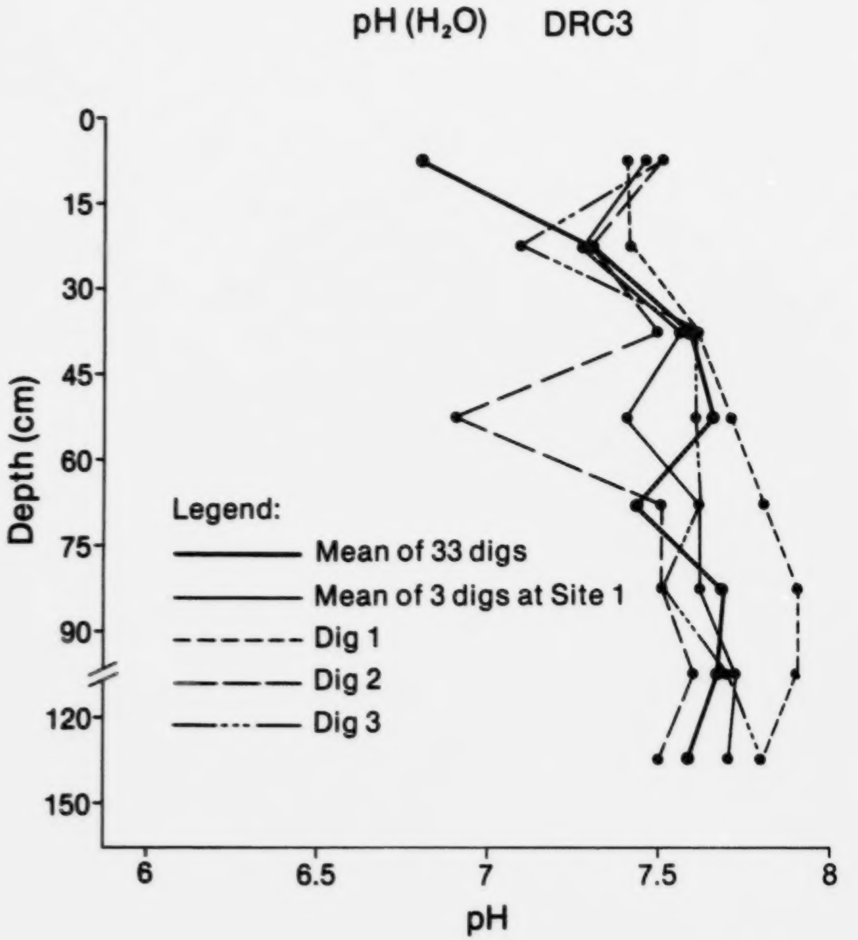


Figure 45. pH Data for Reconstructed Soils at Diplomat Mine

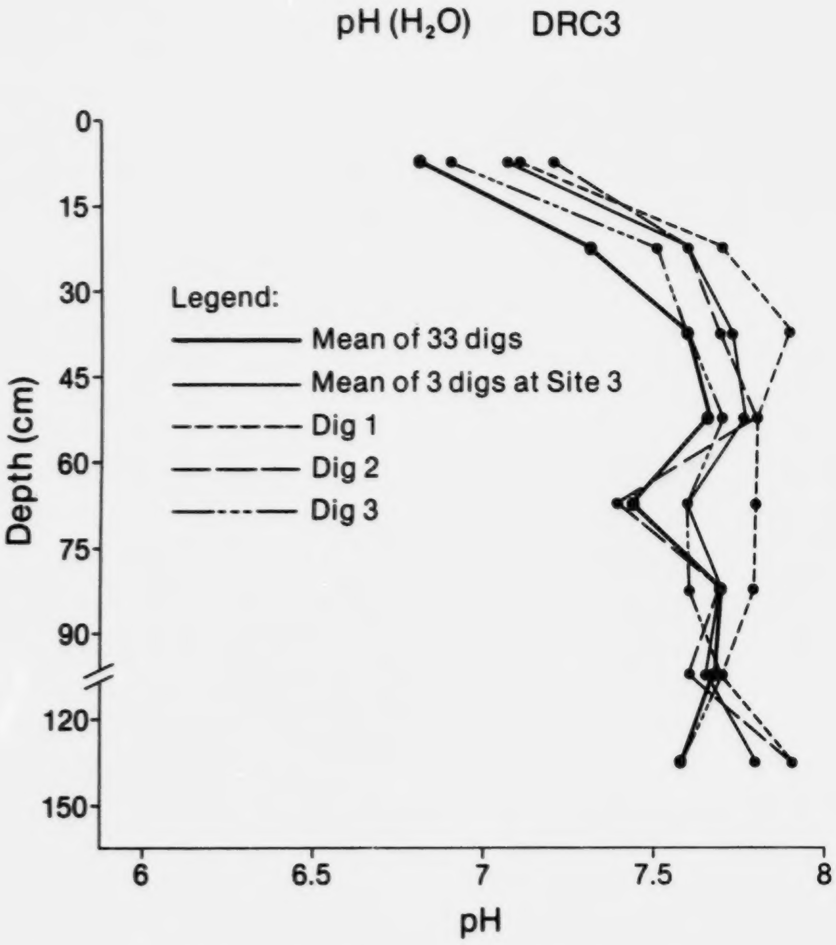


Figure 46. pH Data for Reconstructed Soils at Diplomat Mine

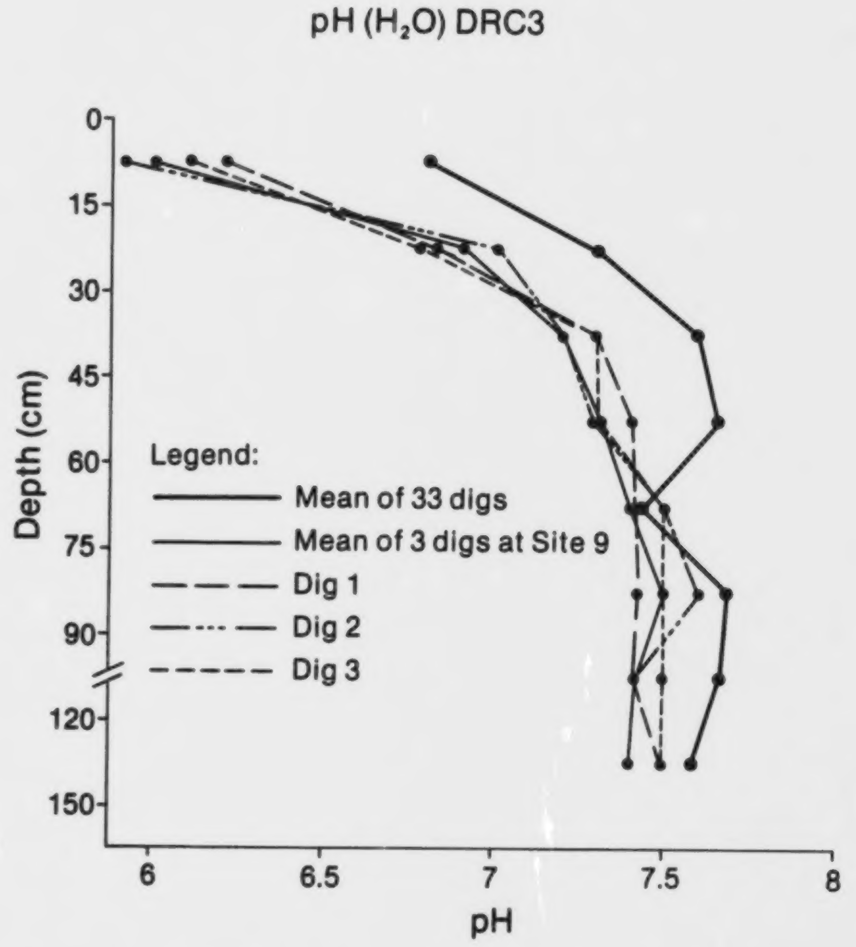


Figure 47. pH Data for Reconstructed Soils at Diplomat Mine

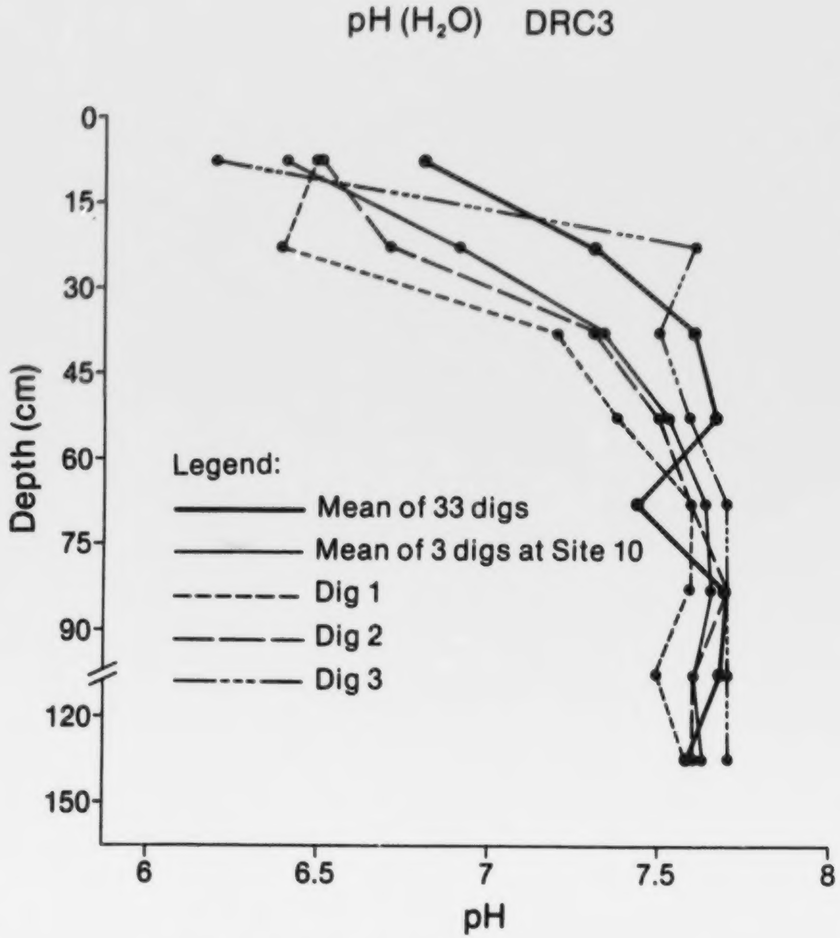


Figure 48. pH Data for Reconstructed Soils at Diplomat Mine

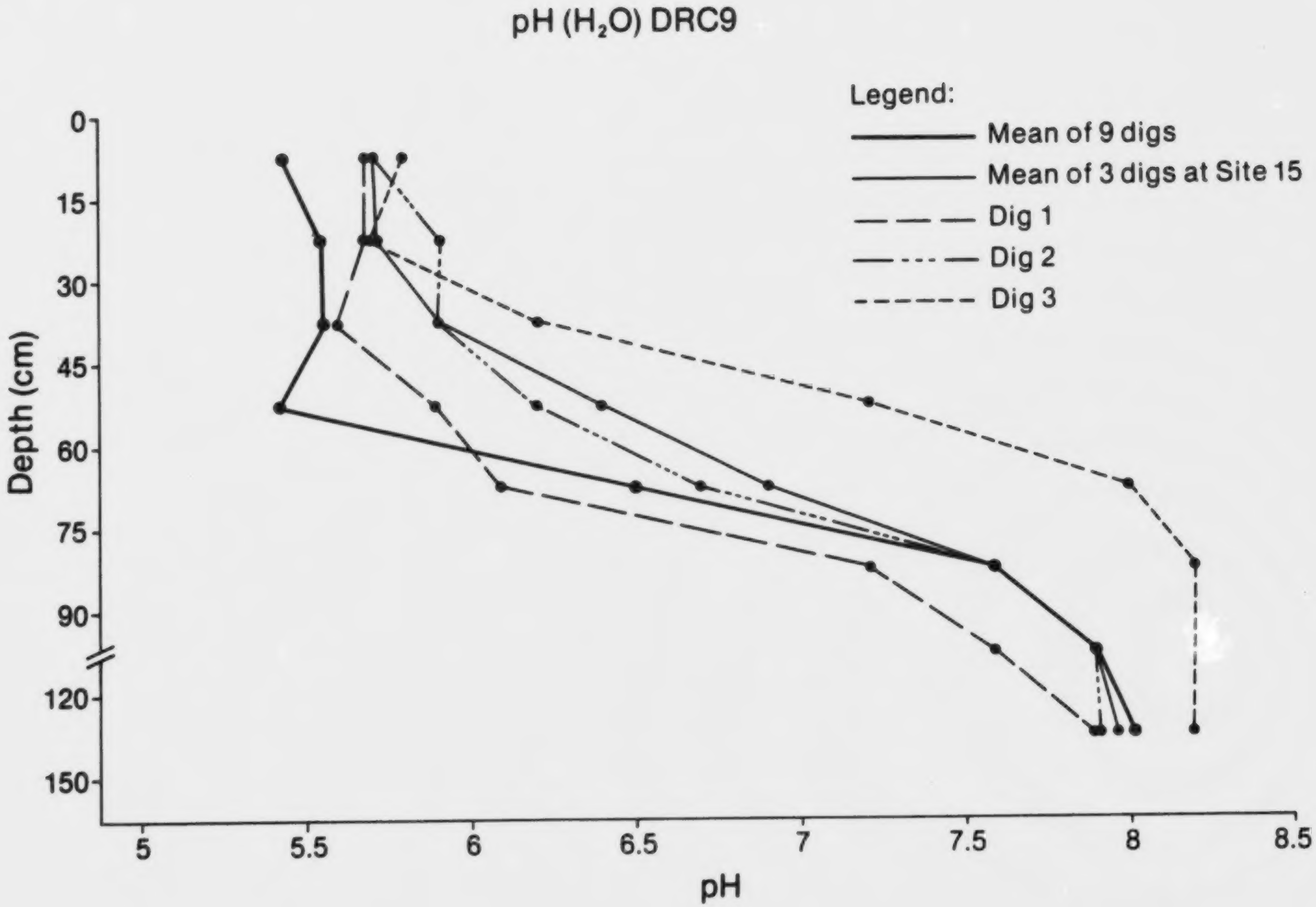


Figure 49. pH Data for Undisturbed Soils at Diplomat Mine

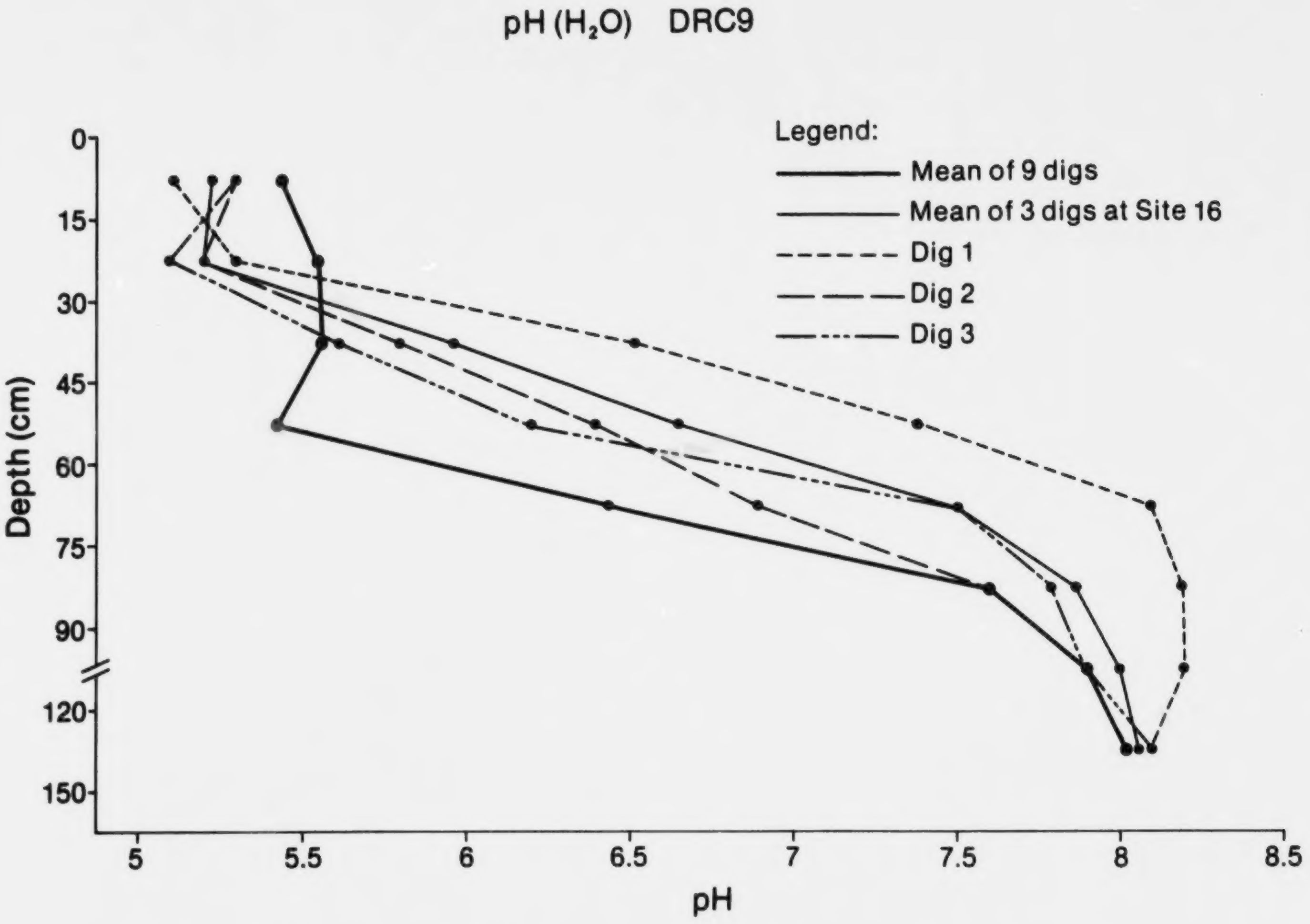


Figure 50. pH Data for Undisturbed Soils at Diplomat Mine

Trends similar to those described above are also evident at Vesta Mine. Within site variability at Highvale cannot be assessed because only one dig per site was completed. The data obtained do not tend to support the conclusion that variability increases with increased distance between sites.

3.1 INSPECTION AND SAMPLING DENSITY

The results presented raise some points about sampling techniques that might be employed in "mapping" of or characterization of reclaimed land. It appears that in order to assess parameters such as pH, SAR, PSAT and clay content one hole per site provides adequate representation or characterization. The next question relates to the number of sample sites that should be considered in order to assess a given parcel of reconstructed soils. It is reasonable to suggest that the variability of reconstructed soils will be directly related to the variability of the pre-mining soils. Therefore, some judgement or subjectivity is involved in determining the appropriate number of inspection and sampling sites required to adequately map a reconstructed soil area.

Inspection sites will provide information about the presence or absence of topsoil and depth thereof, stoniness, and some information about "subsoil" characteristics, rooting depth and pattern if crops are present. Inspection sites are more pertinent when one is separating areas where different materials handling procedures were employed. However, in mapping areas characterized by a specific materials handling type, one is likely to make separations on features such as topography and drainage. Experience gained from this project suggests that topsoil depths for RC3 and RC4 areas, as an example, were relatively uniform and did not result in separable units.

The scale of mapping presently utilized for mapping pre-mining soils is 1:10 000 and it is suggested that the same scale be used for mapping reconstructed soils. This implies an inspection density in the range of 1 to 5 ha/inspection.

In the sampling of reconstructed soils one is concerned with knowing what can be expected from knowing the properties of the material removed from a drill or sample site in terms of describing the remainder of a given area. The data provided in this report provided some insight into the matter.

It is appropriate to recommend a range of sample density requirements for reconstructed soils because pre-mining characteristics will show differences in variability at different locations. The proposed sampling density for characterization of reconstructed soils is 5 to 10 ha/sample site. For this study the average sampling density was 8 ha/sample site which appeared adequate to characterize the areas involved. This sampling density is recommended for initial characterization and assessment of capability following reconstruction. Future sampling to reassess capability may not require the type of density suggested.

Samples collected at each site should reflect the depth (cm) sequence 0 to 15, 15 to 30, 30 to 45, 45 to 60, 60 to 75, 75 to 90, 90 to 120, and 120 to 150, or a reasonable facsimile thereof. Sampling the range indicated provides a clear evaluation of the parameters with depth. For purposes of determining capability for agriculture it has been suggested that the physical and chemical properties of the upper 1 metre be assessed in order that ratings can be developed. However, it is very useful to have information about the additional 50 cm suggested by the depth sequence proposed.

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5. APPENDICES - CHEMICAL AND PHYSICAL PROPERTIES OF RECONSTRUCTED SOILS AT PAINTEARTH MINE (1983)

The following is an explanation of terminology used in Appendices 5.1 and 5.2:

SITE = Site location

DIG = Dig number at each site

SDTH = Sample Depth
D15 represents sample obtained from 0 to 15 cm depth
D30 represents sample obtained from 15 to 30 cm depth

pHH = pH (water solution)

pHC = pH ($CaCl_2$ solution)

PSAT = Percent Saturation

EC = Electrical Conductivity (dS/m)

SAR = Sodium Adsorption Ratio

Na = Sodium (meq/l)

K = Potassium (meq/l)

CA = Calcium (meq/l)

MG = Magnesium (meq/l)

SO_4 = Sulphate (meq/l)

CARB = Calcium Carbonate Equivalent (%)

SND = Sand (%)

SI = Silt (%)

CL = Clay (%)

PMOI = % Moisture

BD = Bulk density

ND = No data

MINE D = Diplomat Mine

MINE H = Highvale Mine

MINE V = Vesta Mine

5.1 Analytical Data For Reconstructed Soils Sampled in 1982.

ANALYTICAL DATA FOR RECONSTRUCTED SOILS SAMPLED IN 1982.

MINE D
MAT RC1
SITE 34

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
821070	394	D15	8.6	7.6	48.0	2.90	1.6	7.10	.82	30.30	11.88	40.19	ND	53	27	20
821071	395	D30	8.5	7.8	53.3	5.20	7.9	41.30	.56	25.60	28.75	75.56	ND	49	28	23
821072	396	D45	8.3	7.9	56.0	7.30	14.0	73.30	.60	22.10	32.71	98.94	ND	48	29	23
821073	397	D60	8.4	7.8	54.0	5.90	11.7	56.70	.67	24.30	22.50	79.50	ND	48	30	22
821074	398	D75	8.5	7.7	62.0	5.10	9.8	44.90	.62	25.00	17.26	67.75	ND	42	34	24
821075	399	D90	8.6	7.8	66.7	4.30	9.6	38.50	.56	19.60	12.53	54.56	ND	35	39	26

MINE D
MAT RC1
SITE 35

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
821076	400	D15	8.0	7.6	50.0	.60	.4	.70	.61	4.20	1.49	.97	ND	44	32	24
821077	401	D30	8.3	7.7	50.0	2.60	.8	3.60	.75	27.10	11.98	34.13	ND	43	33	24
821078	402	D45	8.6	7.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	46	31	23
821079	403	D60	8.5	7.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	36	39	25
821080	404	D75	8.8	7.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	46	27	27
821081	405	D90	8.6	7.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	45	31	24
821082	406	D120	8.5	7.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	40	35	25

MINE D
MAT RC1
SITE 36

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
821083	407	D15	8.3	7.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	53	26	21
821084	408	D30	8.1	7.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	48	28	24
821085	409	D45	8.5	7.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	47	27	26
821086	410	D60	8.4	7.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	45	32	23
821087	411	D75	8.0	7.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
821088	412	D90	8.4	7.6	61.3	2.55	.5	2.10	.79	29.80	9.87	39.38	ND	47	30	23

ANALYTICAL DATA FOR RECONSTRUCTED SOILS SAMPLED IN 1982.

MINE D
MAT RC1
SITE 37

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
821089	413	D15	8.5	7.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
821090	414	D30	8.5	7.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	54	26	20
821091	415	D45	8.5	7.7	53.0	.55	.6	.90	.47	3.50	1.46	2.25	ND	ND	ND	ND
821092	416	D60	8.3	7.6	62.5	.55	.7	1.10	.48	3.40	1.37	2.59	ND	43	34	23
821093	417	D75	8.3	7.7	44.0	.65	1.0	1.60	.55	3.80	1.58	3.56	ND	54	30	16
821094	418	D90	8.5	7.7	52.0	.70	1.0	1.80	.65	4.50	1.81	4.38	ND	56	25	19

MINE D
MAT RC1
SITE 38

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
821095	419	D15	8.3	7.6	50.0	.55	.3	.50	.67	4.20	1.62	1.17	ND	57	25	18
821096	420	D30	8.5	7.4	50.0	.60	.3	.50	.47	4.20	2.10	1.84	ND	59	23	18
821097	421	D45	7.6	7.6	42.0	.80	.5	.90	.59	4.90	2.67	1.88	ND	68	20	12
821098	422	D60	7.9	7.4	42.7	.90	.3	.70	.63	6.50	3.13	7.75	ND	66	20	14
821099	423	D75	8.5	7.4	40.0	2.12	.4	1.40	1.21	21.30	10.03	26.88	ND	67	18	15
821100	424	D90	8.4	7.5	46.7	2.15	.2	.90	1.17	22.50	11.18	32.19	ND	64	20	16

MINE D
MAT RC2
SITE 3

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
82704	28	D15	8.9	7.9	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
82705	29	D30	8.2	7.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
82706	30	D45	9.0	8.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
82707	31	D60	8.8	7.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
82708	32	D90	9.0	8.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
82709	33	D120	8.4	7.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

ANALYTICAL DATA FOR RECONSTRUCTED SOILS SAMPLED IN 1982.

MINE D
MAT RC2
SITE 4

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
82710	34	D15	8.5	7.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
82711	35	D30	9.1	8.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
82712	36	D45	8.8	8.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
82713	37	D60	8.7	7.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
82714	38	D75	8.6	7.9	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
82715	39	D90	8.7	7.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

MINE D
MAT RC2
SITE 5

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
82716	40	D15	7.8	6.9	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
82717	41	D30	4.8	3.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
82718	42	D45	8.8	7.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
82719	43	D60	8.7	7.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
82720	44	D75	8.5	7.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
82721	45	D90	8.7	8.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
82722	46	D120	8.9	7.9	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
82723	47	D150	8.7	7.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
82724	48	D180	8.5	7.8	66.4	3.95	5.0	24.80	1.23	29.50	19.33	ND	ND	43	32	25
82725	49	D210	8.4	7.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
82726	50	D240	8.4	7.5	59.3	3.50	3.6	17.40	1.24	28.80	19.33	ND	ND	45	32	23
82727	51	D270	8.6	7.8	57.5	3.10	1.9	9.10	.92	30.00	16.86	ND	ND	47	28	25
82729	53	D330	8.2	7.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	52	28	20
82730	54	D360	8.5	7.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	47	33	20
82731	55	D390	8.5	7.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	53	28	19
82732	56	D420	8.8	8.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	43	31	26

ANALYTICAL DATA FOR RECONSTRUCTED SOILS SAMPLED IN 1982.

MINE D
MAT RC2
SITE 6

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
82735	59	D15	8.6	7.8	ND	ND	ND	ND	ND	ND	ND	58.44	ND	40	34	26
82736	60	D30	8.8	7.8	ND	ND	ND	ND	ND	ND	ND	50.00	ND	48	28	24
82737	61	D45	9.0	8.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
82738	62	D60	9.1	8.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	45	31	24
82739	63	D75	9.0	8.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
82740	64	D90	8.9	8.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
82741	65	D120	8.9	7.9	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
82742	66	D150	8.6	8.1	68.7	3.80	3.7	18.10	1.13	26.70	21.38	60.31	ND	50	29	21
82743	67	D180	8.6	8.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
82744	68	D210	8.7	7.9	70.0	4.30	5.1	24.60	.95	23.50	23.44	65.00	ND	45	34	21
82745	69	D240	9.1	8.3	116.7	4.35	18.5	52.20	.73	11.80	4.11	55.31	ND	32	36	32

MINE D
MAT RC2
SITE 7

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
82753	77	D15	8.7	8.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
82754	78	D30	8.2	7.9	63.3	1.20	1.2	3.10	.74	7.80	4.61	11.13	ND	38	38	24
82755	79	D45	8.6	7.8	45.2	6.60	16.4	75.70	1.10	27.50	15.20	105.00	ND	43	30	27
82756	80	D60	8.6	8.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
82757	81	D75	8.9	8.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
82758	82	D90	8.7	8.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
82759	83	D120	8.9	8.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
82760	84	D150	8.8	8.3	143.4	6.10	24.9	75.70	.78	14.30	4.19	77.50	ND	ND	ND	ND
82761	85	D180	8.6	7.9	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
82762	86	D210	9.2	8.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
82763	87	D240	9.3	8.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
82765	89	D300	8.7	7.9	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
82766	90	D330	8.9	8.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

ANALYTICAL DATA FOR RECONSTRUCTED SOILS SAMPLED IN 1982.

MINE D
MAT RC2
SITE 8

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
82767	91	D15	8.8	8.3	123.9	5.10	20.9	61.70	.79	12.80	4.69	66.25	ND	ND	ND	ND
82769	93	D45	8.9	8.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
82770	94	D60	8.9	8.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
82771	95	D75	9.0	8.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	44	30	26
82772	96	D90	8.8	7.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
82774	98	D150	8.4	7.9	90.0	4.85	23.2	60.90	.48	11.00	2.75	60.63	ND	46	31	23
82775	99	D180	9.0	8.3	101.5	3.10	26.3	39.10	.25	3.45	.96	31.56	ND	38	33	29
82776	100	D210	8.5	7.7	81.3	3.70	20.7	44.30	.39	7.10	2.06	41.88	ND	35	38	27
82777	101	D240	8.9	8.1	61.5	5.10	13.6	53.00	.77	24.50	6.00	75.00	ND	48	27	25
82778	102	D270	8.7	8.2	79.4	3.45	20.4	40.20	.53	6.20	1.55	40.00	ND	ND	ND	ND
82779	103	D300	8.8	8.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	33	35	32
82780	104	D330	8.5	8.0	102.1	2.35	26.7	29.30	.39	1.80	.61	20.63	ND	ND	ND	ND
82782	106	D390	8.9	8.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
82783	107	D420	8.4	8.0	93.3	2.70	22.8	34.80	.54	3.30	1.36	29.38	ND	ND	ND	ND

MINE D
MAT RC2
SITE 9

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
82784	108	D15	8.9	7.9	66.3	8.75	14.4	65.20	1.26	30.10	10.67	88.75	ND	ND	ND	ND
82785	109	D30	9.0	8.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
82786	110	D45	9.2	8.9	93.8	2.50	19.4	28.70	.48	4.00	.38	25.63	ND	ND	ND	ND
82788	112	D75	8.8	8.0	114.8	4.20	20.6	53.90	.77	10.30	3.45	55.63	ND	ND	ND	ND
82789	113	D90	8.4	8.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
82790	114	D120	8.5	7.9	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
82791	115	D150	8.5	7.8	66.7	5.60	12.5	53.90	.72	24.00	13.32	82.50	ND	41	36	23
82792	116	D180	8.9	8.0	73.3	5.40	14.1	59.10	.74	23.30	11.84	83.75	ND	43	34	23
82793	117	D210	8.4	7.8	63.3	5.00	10.3	44.30	.69	25.50	11.60	72.50	ND	40	38	22
82794	118	D240	8.7	7.8	68.8	5.80	12.9	55.70	.77	24.30	13.16	81.25	ND	61	23	16
82795	119	D270	8.7	7.9	70.0	5.10	10.8	46.10	.77	24.30	11.92	73.75	ND	ND	ND	ND
82796	120	D300	8.7	7.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

ANALYTICAL DATA FOR RECONSTRUCTED SOILS SAMPLED IN 1982.

MINE D
MAT RC2
SITE 10

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
82797	121	D15	8.6	8.1	68.0	4.40	17.1	54.80	.86	15.50	5.10	58.75	ND	ND	ND	ND
82799	123	D45	8.9	8.1	61.4	2.35	20.5	29.60	.42	3.10	1.07	25.00	ND	ND	ND	ND
82802	126	D90	8.4	7.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
82803	127	D120	8.6	7.7	73.3	4.05	16.0	43.50	.56	11.00	3.74	46.88	ND	ND	ND	ND
82804	128	D150	8.7	7.7	80.0	3.90	14.1	38.70	.65	11.30	3.78	42.81	ND	ND	ND	ND
82805	129	D180	8.8	7.9	80.0	3.85	11.6	36.10	.83	14.80	4.61	46.88	ND	45	32	23
82806	130	D210	8.6	8.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

MINE D
MAT RC2
SITE 11

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
82807	131	D15	9.0	8.3	110.3	3.95	17.0	45.20	.81	10.30	3.78	49.69	ND	ND	ND	ND
82809	133	D45	8.8	7.9	115.0	4.05	19.7	46.10	.48	8.20	2.80	55.00	ND	ND	ND	ND
82810	134	D60	8.4	7.7	103.6	5.30	16.4	65.20	.94	21.80	9.79	83.75	ND	ND	ND	ND
82811	135	D75	8.9	7.8	116.5	5.70	18.0	67.00	.76	19.80	7.80	91.25	ND	ND	ND	ND
82813	137	D120	8.3	7.9	110.6	5.30	18.6	59.10	.54	14.80	5.43	68.75	ND	ND	ND	ND
82814	138	D150	8.9	7.9	102.0	5.80	18.5	64.30	.65	17.50	6.58	77.50	ND	ND	ND	ND
82815	139	D180	8.7	7.9	110.0	5.40	16.8	58.30	.67	17.50	6.66	72.50	ND	ND	ND	ND
82816	140	D210	8.4	8.0	100.0	5.30	15.8	57.40	.72	20.00	6.33	73.75	ND	ND	ND	ND
82817	141	D240	8.4	7.9	80.5	3.82	12.6	39.30	.74	14.80	4.69	51.25	ND	ND	ND	ND
82818	142	D270	8.6	7.8	62.9	2.40	12.2	23.30	.47	5.30	2.01	18.75	ND	ND	ND	ND

ANALYTICAL DATA FOR RECONSTRUCTED SOILS SAMPLED IN 1982.

MINE D
MAT RC2
SITE 12

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
82819	143	D15	9.0	8.0	111.3	5.00	18.2	59.10	.65	15.50	5.51	71.25	ND	ND	ND	ND
82821	145	D45	8.8	7.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
82823	147	D75	8.9	8.2	126.7	5.50	20.1	66.10	.78	15.00	6.60	85.00	ND	ND	ND	ND
82824	148	D90	8.9	8.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
82825	149	D120	7.7	6.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
82826	150	D150	8.4	7.4	118.0	6.60	23.2	82.60	1.46	18.80	6.60	96.25	ND	ND	ND	ND
82828	152	D210	8.1	8.3	146.7	5.30	28.5	69.60	1.33	9.40	2.55	68.75	ND	ND	ND	ND
82830	154	D270	8.7	7.9	110.4	5.60	26.1	73.90	1.41	11.30	4.80	71.25	ND	ND	ND	ND
82831	155	D300	8.7	7.9	98.7	5.90	19.0	67.00	.73	17.50	7.40	80.00	ND	ND	ND	ND
82832	156	D330	8.2	7.9	93.3	6.10	16.6	69.60	.81	23.80	11.51	92.50	ND	ND	ND	ND
82833	157	D360	8.0	7.3	56.7	2.70	1.0	4.60	1.06	28.30	12.75	41.25	ND	ND	ND	ND
82834	158	D390	8.7	8.0	83.3	5.00	19.1	58.30	.42	12.00	6.67	67.50	ND	ND	ND	ND
82835	159	D420	8.6	7.9	76.3	6.40	18.3	80.90	.68	25.80	13.24	98.75	ND	ND	ND	ND
82836	160	D450	8.4	7.6	77.1	6.60	17.6	75.70	.79	24.00	12.91	98.75	ND	ND	ND	ND

MINE D
MAT RC2
SITE 13

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
82837	161	D15	8.2	7.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
82838	162	D30	7.8	7.9	132.5	4.50	19.7	53.00	.54	10.80	3.66	59.06	ND	ND	ND	ND
82839	163	D45	7.9	7.9	123.5	4.60	18.6	53.90	.56	12.50	4.36	61.88	ND	ND	ND	ND
82840	164	D60	8.2	7.4	108.1	6.20	19.3	74.80	.67	21.80	8.31	90.00	ND	ND	ND	ND
82842	166	D90	8.1	7.9	129.3	3.60	23.1	46.10	.41	5.70	2.26	45.00	ND	ND	ND	ND
82843	167	D120	8.5	8.0	110.0	3.60	25.9	45.20	.34	4.80	1.28	41.56	ND	39	29	32
82844	168	D150	8.5	8.2	150.8	2.40	34.0	27.80	.18	1.10	.24	20.94	ND	ND	ND	ND
82845	169	D180	8.4	8.0	105.3	2.80	31.6	35.20	.25	2.00	.48	29.06	ND	ND	ND	ND
82846	170	D210	7.9	7.6	84.9	5.30	18.8	64.30	.64	19.00	4.44	76.25	ND	ND	ND	ND
82847	171	D240	8.3	7.9	101.0	4.90	21.9	60.00	.58	12.00	3.08	63.75	ND	ND	ND	ND
82848	172	D270	8.3	8.0	99.3	4.55	22.8	56.50	.42	10.00	2.26	60.31	ND	ND	ND	ND
82849	173	D300	8.8	8.1	142.3	3.05	30.7	38.50	.24	2.60	.55	31.56	ND	ND	ND	ND

ANALYTICAL DATA FOR RECONSTRUCTED SOILS SAMPLED IN 1982.

MINE D
MAT RC2
SITE 14

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
82850	174	D15	9.0	8.3	75.9	5.30	13.9	56.10	.85	23.30	9.21	77.50	ND	ND	ND	ND
82852	176	D45	9.0	8.1	80.9	3.00	20.7	35.70	.38	4.50	1.48	34.69	ND	ND	ND	ND
82853	177	D60	9.0	8.3	94.6	3.65	18.2	42.20	.51	8.30	2.51	45.94	ND	ND	ND	ND
82854	178	D75	9.0	8.4	96.7	3.70	19.8	43.50	.53	7.40	2.26	46.25	ND	ND	ND	ND
82856	180	D120	8.8	7.9	124.0	4.10	17.6	46.10	.53	10.30	3.37	51.88	ND	30	42	28
82857	181	D150	8.7	8.2	79.3	3.80	14.6	41.30	.55	11.00	5.10	49.38	ND	36	40	24
82858	182	D180	8.7	7.8	57.3	2.00	10.3	20.40	.34	5.00	2.80	22.19	ND	ND	ND	ND
82859	183	D210	9.3	8.7	50.7	1.15	6.5	9.30	.29	2.70	1.45	8.94	ND	41	36	23
82860	184	D240	8.3	7.8	55.3	1.00	3.5	5.80	.36	3.70	1.85	8.31	ND	45	31	24
82861	185	D270	8.8	7.7	51.0	3.00	1.6	7.60	.99	32.90	11.76	50.00	ND	ND	ND	ND
82862	186	D300	8.5	7.6	47.3	3.20	1.6	7.90	.97	34.80	12.99	53.13	ND	47	32	21
82863	187	D330	8.7	7.6	48.0	3.25	2.4	11.30	.96	30.50	12.99	52.81	ND	46	32	22
82864	188	D360	8.4	7.7	59.2	4.05	4.8	23.70	1.06	31.80	16.86	67.50	ND	ND	ND	ND
82865	189	D390	8.3	7.7	54.0	5.20	8.5	41.30	.94	28.00	19.32	82.50	ND	47	31	22

MINE D
MAT RC2
SITE 15

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
82866	190	D15	8.7	7.7	90.5	5.00	12.8	49.60	.86	22.50	7.57	71.25	ND	ND	ND	ND
82867	191	D30	8.6	7.7	124.0	5.40	17.4	62.60	.78	19.30	6.50	80.00	ND	ND	ND	ND
82869	193	D60	8.6	7.6	116.8	5.80	17.5	66.10	.74	21.30	7.24	85.00	ND	ND	ND	ND
82870	194	D75	8.7	8.2	122.9	5.75	19.2	66.10	.74	17.60	6.17	80.00	ND	ND	ND	ND
82872	196	D120	8.7	7.8	99.2	4.30	18.1	48.70	.62	10.50	3.99	54.69	ND	ND	ND	ND
82873	197	D150	8.5	7.8	76.7	5.45	13.3	54.80	.65	24.00	9.95	81.25	ND	ND	ND	ND
82874	198	D180	8.4	7.9	93.1	6.15	15.6	67.00	.67	23.80	13.08	93.75	ND	ND	ND	ND

ANALYTICAL DATA FOR RECONSTRUCTED SOILS SAMPLED IN 1982.

MINE D
MAT RC2
SITE 16

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
82875	199	D15	8.4	7.7	58.9	4.85	9.6	41.70	.79	24.80	13.16	72.50	ND	ND	ND	ND
82876	200	D30	8.5	7.8	77.6	5.55	13.3	58.30	.69	23.30	14.97	87.50	ND	ND	ND	ND
82877	201	D45	8.7	7.7	82.2	5.70	12.9	56.50	.85	23.30	14.80	86.25	ND	ND	ND	ND
82878	202	D60	8.6	7.8	79.8	5.30	12.4	50.40	.77	21.00	12.25	76.25	ND	ND	ND	ND
82879	203	D75	8.6	7.8	73.0	5.70	13.2	58.30	.77	24.30	14.88	90.00	ND	ND	ND	ND
82881	205	D120	8.6	7.7	79.3	5.65	11.9	53.00	.82	25.50	14.31	86.25	ND	ND	ND	ND
82882	206	D150	8.7	7.8	93.3	5.55	13.1	54.80	.87	23.30	11.60	81.25	ND	ND	ND	ND
82883	207	D180	9.1	8.3	60.0	5.00	13.5	52.20	.55	19.00	10.86	71.25	ND	ND	ND	ND
82884	208	D210	8.6	7.8	64.0	5.30	11.0	50.40	.76	24.50	17.68	85.00	ND	ND	ND	ND
82885	209	D240	8.6	7.8	66.0	5.60	11.3	53.90	.76	24.30	21.38	91.25	ND	ND	ND	ND
82886	210	D270	9.0	8.4	55.8	5.80	11.4	53.90	.50	24.30	20.56	87.50	ND	ND	ND	ND
82887	211	D300	8.4	7.7	66.7	5.50	10.9	50.40	.79	24.50	18.50	85.00	ND	ND	ND	ND
82889	213	D360	8.4	7.5	67.3	5.50	11.6	53.90	.78	24.50	18.91	88.75	ND	ND	ND	ND
82890	214	D390	8.9	7.9	74.2	5.40	10.7	51.30	.86	26.50	19.74	86.25	ND	ND	ND	ND
82891	215	D420	8.4	7.8	63.3	5.35	11.4	52.20	.87	24.50	17.27	86.25	ND	ND	ND	ND

MINE D
MAT RC2
SITE 17

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
82892	216	D15	8.2	7.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
82893	217	D30	7.7	7.7	68.7	3.00	.3	1.50	.60	30.80	20.15	48.13	ND	ND	ND	ND
82894	218	D45	7.9	8.0	44.7	3.30	.4	2.30	.74	29.80	29.19	57.50	ND	ND	ND	ND
82895	219	D60	8.2	7.8	52.0	3.60	1.0	5.60	.88	28.00	31.66	62.19	ND	ND	ND	ND
82896	220	D75	8.2	7.8	47.3	3.55	1.8	9.60	.90	28.30	27.96	61.88	ND	ND	ND	ND
82897	221	D90	8.0	7.7	48.0	3.80	3.0	15.40	.88	27.30	24.26	63.75	ND	ND	ND	ND
82898	222	D120	7.8	7.6	49.3	3.25	2.0	9.10	1.01	28.00	14.14	45.94	ND	ND	ND	ND
82899	223	D150	7.8	7.8	40.0	3.30	2.8	12.20	.85	23.80	15.54	47.50	ND	ND	ND	ND
82900	224	D180	8.1	7.7	41.3	3.25	1.9	8.90	.86	27.30	15.05	46.56	ND	ND	ND	ND
82901	225	D210	8.8	7.9	55.3	3.25	1.7	7.90	.85	27.30	15.54	46.56	ND	ND	ND	ND

ANALYTICAL DATA FOR RECONSTRUCTED SOILS SAMPLED IN 1982

MINE D
MAT RC2
SITE 18

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
82902	226	D15	8.6	7.9	48.7	.75	.4	.70	.51	5.40	1.85	1.59	ND	ND	ND	ND
82903	227	D30	8.3	7.8	46.7	.70	.7	1.20	.39	4.50	1.69	2.81	ND	ND	ND	ND
82904	228	D45	8.2	7.5	54.7	2.55	.4	1.90	1.01	30.50	9.87	36.56	ND	ND	ND	ND
82905	229	D60	8.6	7.7	56.0	2.65	.6	2.50	1.08	29.50	10.36	39.38	ND	ND	ND	ND
82906	230	D75	8.9	8.4	90.0	6.10	17.8	68.70	.56	19.80	9.87	78.75	ND	ND	ND	ND
82907	231	D90	8.6	7.8	60.7	3.05	1.3	5.90	1.24	29.80	13.32	44.69	ND	ND	ND	ND
82908	232	D120	8.7	7.8	62.7	2.90	1.3	5.70	1.22	27.00	11.92	41.88	ND	ND	ND	ND
82909	233	D150	8.6	7.8	62.3	3.00	1.6	7.30	1.36	30.50	13.57	46.88	ND	ND	ND	ND
82910	234	D210	8.7	7.7	63.3	3.10	2.0	9.10	1.28	29.50	13.08	48.44	ND	ND	ND	ND
82911	235	D240	8.6	7.8	66.7	3.55	6.4	26.10	1.05	23.30	9.95	14.69	ND	ND	ND	ND
82912	236	D270	8.7	7.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
82913	237	D300	8.8	7.8	70.4	3.65	4.9	21.10	1.17	26.80	10.86	54.06	ND	ND	ND	ND
82914	238	D330	8.8	7.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

MINE D
MAT RC2
SITE 19

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
82915	239	D15	8.8	7.4	56.7	3.10	1.1	5.50	.95	33.80	13.49	46.25	ND	ND	ND	ND
82916	240	D30	8.6	7.6	53.3	3.85	3.7	18.00	.95	27.80	19.74	60.63	ND	ND	ND	ND
82917	241	D45	8.0	7.7	75.3	4.75	7.2	35.40	.72	27.00	21.38	76.25	ND	ND	ND	ND
82918	242	D60	8.0	7.1	61.3	5.00	7.0	35.00	.55	27.50	23.03	73.75	ND	ND	ND	ND
82919	243	D75	8.4	7.3	66.7	4.00	6.4	27.20	.30	18.80	17.68	58.13	ND	ND	ND	ND
82920	244	D90	8.4	7.8	62.7	4.50	5.3	26.10	.45	26.30	22.62	68.75	ND	ND	ND	ND
82921	245	D120	8.6	8.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
82922	246	D180	8.7	7.9	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
82923	247	D240	8.0	7.5	70.0	4.05	5.5	25.00	.78	27.50	13.57	58.44	ND	ND	ND	ND

ANALYTICAL DATA FOR RECONSTRUCTED SOILS SAMPLED IN 1982.

MINE D
MAT RC2
SITE 20

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
82924	248	D15	8.4	7.8	73.3	2.75	1.6	6.90	1.04	26.50	10.36	39.69	ND	ND	ND	ND
82925	249	D30	8.5	8.1	66.7	3.10	2.2	10.00	.97	30.30	11.18	45.63	ND	ND	ND	ND
82926	250	D45	8.3	7.4	56.7	3.00	2.8	12.80	.82	30.30	10.28	49.06	ND	ND	ND	ND
82927	251	D60	8.4	7.4	56.2	3.55	3.7	17.20	.82	30.50	12.09	50.00	ND	ND	ND	ND
82928	252	D75	8.3	7.9	56.7	3.55	4.2	19.80	.94	30.30	13.49	49.06	ND	ND	ND	ND
82929	253	D90	8.1	7.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
82930	254	D120	8.6	8.2	62.5	3.95	5.3	23.90	.81	28.50	12.99	55.63	ND	ND	ND	ND
82931	255	D180	8.3	7.3	62.7	4.10	5.7	27.20	.56	27.50	18.50	66.25	ND	ND	ND	ND
82932	256	D210	8.6	7.8	62.0	4.20	5.3	25.90	.76	28.00	19.33	65.00	ND	ND	ND	ND
82933	257	D240	8.3	7.5	66.1	3.95	4.8	23.00	.88	27.80	18.50	63.75	ND	ND	ND	ND
82934	258	D270	8.5	7.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
82935	259	D300	8.7	7.8	66.7	4.10	5.0	24.80	.78	30.30	19.33	65.00	ND	ND	ND	ND
82936	260	D330	8.3	7.6	58.7	3.90	5.3	25.20	.87	30.30	15.46	62.50	ND	ND	ND	ND

MINE D
MAT RC2
SITE 21

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
82937	261	D15	8.2	7.5	54.0	3.30	2.4	11.50	.82	31.30	15.63	52.50	ND	40	32	28
82938	262	D30	8.6	7.7	52.0	4.40	5.4	26.30	.73	28.50	19.74	68.75	ND	47	26	27
82939	263	D45	8.7	7.8	48.0	4.60	6.3	30.40	.76	27.30	18.91	71.25	ND	51	28	21
82940	264	D60	8.7	7.8	47.3	4.70	8.1	36.70	.67	26.50	14.97	71.25	ND	49	26	25
82941	265	D75	8.5	7.9	54.0	4.80	8.5	38.90	.73	26.50	15.30	75.00	ND	56	27	17
82942	266	D90	8.6	7.8	66.7	4.65	8.3	37.60	.79	25.00	15.71	72.50	ND	49	31	20
82943	267	D120	8.4	7.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	47	32	21

ANALYTICAL DATA FOR RECONSTRUCTED SOILS SAMPLED IN 1982.

MINE D
MAT RC2
SITE 22

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
82944	268	D15	8.1	7.6	51.3	3.00	2.6	11.30	.92	29.00	10.03	46.88	ND	45	32	23
82945	269	D30	8.3	7.7	66.7	3.65	5.5	24.10	1.03	27.00	11.02	57.81	ND	42	34	24
82946	270	D45	8.3	7.7	53.3	3.90	6.3	27.40	.77	26.50	11.35	60.31	ND	43	28	29
82947	271	D60	8.8	7.9	ND	ND	ND	ND	ND	ND	ND	ND	ND	43	33	24
82948	272	D75	8.6	7.6	52.7	3.55	5.5	24.60	1.03	27.50	12.12	57.19	ND	46	29	25
82949	273	D90	8.0	7.5	50.7	3.70	5.1	23.30	.80	28.00	13.32	58.13	ND	49	23	28
82950	274	D120	8.6	7.7	56.7	3.60	4.7	20.20	.82	23.80	12.91	52.50	ND	43	36	21

MINE D
MAT RC2
SITE 23

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
82951	275	D15	8.1	7.5	57.3	3.20	1.0	4.60	1.17	32.00	14.33	51.88	ND	44	33	23
82952	276	D30	7.9	7.7	ND	ND	ND	ND	ND	ND	ND	72.50	ND	23	48	29
82953	277	D45	8.2	7.7	53.3	3.90	2.5	13.70	1.44	30.30	29.19	70.00	ND	48	27	25
82954	278	D60	7.8	7.7	66.7	3.50	1.9	9.80	1.31	28.50	23.44	59.38	ND	41	33	26
82955	279	D75	7.7	7.6	68.0	3.65	1.9	9.60	1.19	29.80	23.85	60.31	ND	34	36	30
82956	280	D90	7.8	7.7	66.7	3.40	1.7	8.30	1.14	28.80	21.38	55.94	ND	37	34	29

MINE D
MAT RC2
SITE 24

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
82957	281	D15	8.3	7.3	50.0	.85	.2	.50	.33	7.10	2.18	4.19	ND	42	36	22
82958	282	D30	8.0	7.5	50.0	2.05	.3	1.00	.50	24.30	5.18	27.19	ND	46	32	22
82959	283	D45	7.9	7.5	53.3	3.25	.7	3.60	.95	29.50	22.62	53.13	ND	50	24	26
82960	284	D60	8.6	7.6	53.3	3.75	1.9	9.70	.78	28.30	25.90	60.00	ND	ND	ND	ND
82961	285	D75	8.5	7.6	54.8	4.50	4.1	22.40	1.01	28.30	31.66	76.25	ND	50	26	24

ANALYTICAL DATA FOR RECONSTRUCTED SOILS SAMPLED IN 1982

MINE D
MAT RC2
SITE 25

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
82962	286	D15	8.5	7.6	50.0	3.10	2.3	10.40	.71	29.80	10.69	46.88	ND	43	33	24
82963	287	D30	8.7	7.8	51.1	4.25	5.7	26.70	.72	27.50	16.28	65.00	ND	47	29	24
82964	288	D45	8.9	7.9	ND	ND	ND	ND	ND	ND	ND	ND	ND	58	22	20
82966	290	D75	8.4	7.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
82967	291	D90	8.2	7.7	59.7	4.85	10.2	43.50	.83	25.30	11.27	68.75	ND	59	24	17
82968	292	D120	8.4	7.7	50.0	5.30	10.8	47.80	.77	26.50	12.50	72.50	ND	61	18	21

MINE D
MAT RC2
SITE 26

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
82969	293	D15	8.3	7.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	48	30	22
82970	294	D30	8.4	7.5	53.3	2.80	.5	2.50	.59	31.50	13.32	45.00	ND	49	29	22
82971	295	D45	8.3	7.6	63.0	3.90	2.9	15.00	.91	27.00	27.55	66.25	ND	48	30	22
82972	296	D60	8.7	7.9	65.2	4.35	4.4	22.80	.88	26.50	26.73	71.25	ND	48	30	22
82973	297	D75	8.6	7.6	64.2	4.60	6.0	31.70	.88	27.30	29.19	78.75	ND	53	24	23
82974	298	D90	8.8	7.8	66.7	4.75	7.0	35.40	.78	25.50	25.90	80.00	ND	45	32	23
82975	299	D120	8.7	7.9	53.3	5.80	9.7	49.60	.82	26.00	25.90	93.75	ND	55	28	17

MINE D
MAT RC2
SITE 61

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
82746	70	D15	8.9	8.1	50.7	3.35	3.1	14.30	.69	30.30	11.92	51.88	ND	46	28	26
82747	71	D30	9.0	8.1	52.0	5.20	9.9	46.10	.71	25.80	17.68	81.25	ND	50	24	26
82748	72	D45	8.7	8.2	63.3	5.40	11.4	53.00	.97	25.50	18.09	83.75	ND	44	28	28
82749	73	D60	8.8	8.2	51.6	5.40	10.3	47.80	.71	25.50	17.68	82.50	ND	50	25	25
82750	74	D75	8.6	8.3	56.7	5.25	10.0	49.60	1.00	26.80	22.62	87.50	ND	49	26	25
82751	75	D90	8.7	8.2	57.3	5.35	10.4	51.30	.96	27.00	21.79	88.75	ND	47	31	22
82752	76	D120	8.7	8.2	66.7	5.10	10.4	48.70	1.01	26.00	17.68	82.50	ND	ND	ND	ND

ANALYTICAL DATA FOR RECONSTRUCTED SOILS SAMPLED IN 1982.

MINE D
MAT RC3
SITE 1

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
82677	1	D15	8.5	7.9	ND	ND	ND	ND	ND	ND	ND	ND	.40	ND	ND	ND
82678	2	D30	8.0	7.6	ND	ND	ND	ND	ND	ND	ND	ND	2.09	ND	ND	ND
82679	3	D45	8.4	8.1	ND	ND	ND	ND	ND	ND	ND	ND	.63	ND	ND	ND
82680	4	D60	8.5	7.8	ND	ND	ND	ND	ND	ND	ND	ND	2.43	ND	ND	ND
82681	5	D75	8.6	7.7	ND	ND	ND	ND	ND	ND	ND	ND	1.25	ND	ND	ND
82682	6	D90	8.6	7.7	ND	ND	ND	ND	ND	ND	ND	ND	2.31	ND	ND	ND
82683	7	D120	8.7	7.6	ND	ND	ND	ND	ND	ND	ND	ND	1.48	ND	ND	ND
82684	8	D150	8.5	7.6	ND	ND	ND	ND	ND	ND	ND	ND	2.72	ND	ND	ND
82685	9	D180	8.6	7.3	ND	ND	ND	ND	ND	ND	ND	ND	1.79	ND	ND	ND
82686	10	D210	8.6	7.2	ND	ND	ND	ND	ND	ND	ND	ND	1.60	ND	ND	ND
82687	11	D240	8.8	8.0	ND	ND	ND	ND	ND	ND	ND	ND	2.12	ND	ND	ND
82688	12	D270	8.6	8.1	ND	ND	ND	ND	ND	ND	ND	ND	2.20	ND	ND	ND
82689	13	D300	8.5	7.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
82690	14	D330	8.7	7.9	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
82691	15	D360	7.9	7.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
82692	16	D390	8.3	7.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

MINE D
MAT RC3
SITE 2

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
82693	17	D15	7.2	6.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
82694	18	D30	7.6	8.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
82695	19	D45	8.0	7.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
82696	20	D60	7.9	7.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
82697	21	D75	8.5	7.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
82698	22	D90	8.3	7.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
82699	23	D120	8.5	7.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
82700	24	D150	8.6	7.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
82701	25	D180	8.5	7.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
82702	26	D210	8.5	7.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
82703	27	D240	8.6	7.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

ANALYTICAL DATA FOR RECONSTRUCTED SOILS SAMPLED IN 1982.

MINE D
MAT RC3
SITE 27

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
82976	300	D15	8.2	7.4	57.0	1.05	1.9	4.50	.36	7.10	3.95	8.69	ND	37	38	25
82977	301	D30	8.0	7.8	57.0	1.45	2.4	6.90	.28	10.30	6.41	16.25	ND	42	38	20
82978	302	D45	8.9	7.8	54.7	2.00	1.5	5.50	.56	17.80	9.13	26.25	ND	51	31	18
82979	303	D60	8.7	7.7	63.3	1.10	.7	1.80	.49	8.20	4.11	10.88	ND	46	30	24
82980	304	D75	8.8	7.7	56.7	1.00	4.7	11.30	.46	7.60	4.11	9.06	ND	43	30	27
82981	305	D90	8.9	8.0	56.8	1.15	.6	1.50	.54	8.40	4.36	9.88	ND	50	30	20
82982	306	D120	8.6	7.5	50.0	1.25	.5	1.40	.41	10.00	5.10	13.13	ND	53	28	19
82983	307	D150	8.6	7.7	53.3	.85	.7	1.40	.41	5.90	3.41	7.31	ND	47	29	24
82984	308	D180	8.4	7.5	46.0	.83	2.7	5.40	.92	5.30	2.81	5.00	ND	ND	ND	ND
82985	309	D210	8.5	7.6	53.3	1.70	.5	1.80	.55	17.00	7.81	23.13	ND	55	23	22
82986	310	D240	8.6	7.9	56.7	2.75	.7	3.20	.79	33.00	15.95	47.81	ND	47	31	22
82987	311	D300	8.5	7.6	59.5	.78	1.7	3.60	1.00	6.00	3.13	6.00	ND	ND	ND	ND
82988	312	D330	8.5	7.7	50.0	.82	.8	1.60	.51	6.10	2.96	6.63	ND	61	22	17
82989	313	D360	8.3	7.7	50.0	.55	.4	1.20	.30	3.50	19.33	2.69	ND	62	19	19
82990	314	D390	8.5	7.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

MINE D
MAT RC3
SITE 28

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
82991	315	D15	8.4	7.3	68.3	.90	3.8	7.70	1.06	4.30	3.74	7.44	ND	ND	ND	ND
82992	316	D30	8.6	7.8	50.0	3.70	3.1	15.70	1.03	29.30	21.79	59.38	ND	46	28	26
82993	317	D45	8.1	7.7	53.3	3.75	3.8	18.30	1.03	27.80	18.50	58.13	ND	56	26	18
82994	318	D60	8.5	7.7	54.7	4.00	4.0	20.40	1.09	28.80	22.20	62.50	ND	47	28	25
82995	319	D75	7.9	6.9	52.7	4.80	5.1	29.10	1.27	29.30	36.18	83.75	ND	47	29	24
82996	320	D90	8.5	7.9	50.0	4.35	4.5	25.00	1.22	29.30	32.48	77.50	ND	ND	ND	ND
82998	322	D150	8.7	7.8	52.7	4.75	7.0	36.10	1.08	28.30	25.49	77.50	ND	58	24	18
82999	323	D180	8.7	8.0	55.6	4.05	3.2	17.20	1.03	27.00	30.02	66.25	ND	56	26	18
821000	324	D210	8.5	8.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	54	25	21
821001	325	D240	8.6	8.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	53	26	21
821002	326	D300	8.6	7.9	ND	ND	ND	ND	ND	ND	ND	ND	ND	44	33	23

ANALYTICAL DATA FOR RECONSTRUCTED SOILS SAMPLED IN 1982.

MINE D
MAT RC3
SITE 29

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
821003	327	D15	8.0	7.4	72.0	.75	1.0	1.80	.88	4.00	2.55	3.44	ND	43	36	21
821004	328	D30	7.5	6.9	64.7	2.10	1.6	5.50	1.41	14.30	9.29	25.63	ND	42	38	20
821005	329	D45	7.3	6.7	60.0	2.85	3.1	12.80	1.82	20.80	14.47	43.44	ND	40	36	24
821006	330	D60	8.6	7.6	53.3	3.60	3.3	16.70	1.56	29.00	20.97	60.31	ND	51	27	22
821007	331	D75	8.4	7.8	50.0	3.60	3.2	15.90	1.36	29.30	20.56	59.38	ND	50	26	24
821008	332	D90	8.0	7.8	58.8	3.40	2.9	14.30	1.08	28.80	18.91	56.25	ND	55	28	17
821009	333	D120	8.7	7.8	50.0	3.65	3.7	19.80	1.23	31.50	24.67	68.75	ND	56	23	21
821010	334	D150	8.3	7.8	56.7	4.00	4.8	22.60	.88	27.30	17.68	62.50	ND	56	26	18
821011	335	D180	8.7	7.8	50.0	3.75	4.2	21.30	1.24	31.30	20.56	65.00	ND	56	27	17
821012	336	D210	8.2	7.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	51	27	22
821013	337	D240	8.6	7.8	64.1	2.18	1.3	5.10	1.87	20.30	11.35	29.38	ND	48	31	21
821014	338	D270	8.7	7.9	50.0	3.38	5.7	24.80	.90	24.30	13.98	55.31	ND	64	23	13
821015	339	D300	8.5	7.9	50.0	3.75	5.2	25.20	1.09	27.50	19.33	63.75	ND	53	23	24
821016	340	D330	8.6	7.9	50.0	4.25	5.2	25.90	1.06	26.50	23.44	67.50	ND	54	26	20
821017	341	D360	8.3	8.0	55.6	4.25	5.5	27.40	1.14	27.50	22.62	68.75	ND	54	14	32
821018	342	D390	8.7	8.0	57.0	3.35	3.4	16.10	1.38	26.50	19.74	54.38	ND	49	22	29

ANALYTICAL DATA FOR RECONSTRUCTED SOILS SAMPLED IN 1982.

MINE D
MAT RC3
SITE 30

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
821019	343	D15	8.8	7.8	57.7	2.50	1.9	7.90	1.18	23.00	12.34	35.94	ND	46	40	14
821020	344	D30	8.6	7.9	50.0	3.70	3.6	18.30	1.03	30.50	22.20	62.50	ND	44	33	23
821021	345	D45	8.3	7.5	53.3	3.55	3.6	17.40	.96	29.00	18.09	56.56	ND	42	35	23
821022	346	D60	8.7	7.9	57.5	3.90	4.6	22.40	1.36	26.80	21.38	62.50	ND	ND	ND	ND
821023	347	D75	8.8	7.9	53.3	4.90	6.2	33.90	1.01	26.80	32.89	81.25	ND	47	30	23
821024	348	D90	8.6	7.8	53.3	4.75	6.3	33.00	1.14	27.50	26.73	76.25	ND	47	31	22
821025	349	D120	8.7	7.9	54.4	4.80	6.6	35.40	1.09	28.50	28.37	80.00	ND	44	36	20
821026	350	D150	8.6	7.7	53.3	4.70	6.6	35.40	1.24	28.80	28.37	82.50	ND	45	34	21
821027	351	D180	8.4	7.9	53.3	4.55	6.0	29.60	.95	26.30	22.62	66.25	ND	45	32	23
821028	352	D210	8.1	7.9	54.0	4.00	4.3	20.90	.85	26.00	21.38	58.13	ND	46	31	23
821029	353	D240	8.2	7.8	52.0	3.50	2.9	14.10	.74	28.00	19.74	52.19	ND	ND	ND	ND
821030	354	D270	8.1	7.7	55.3	3.35	2.2	10.40	.73	28.50	18.50	50.00	ND	48	30	22
821031	355	D330	8.4	7.6	56.8	3.65	3.4	16.50	.81	27.30	20.56	53.44	ND	43	33	24

MINE D
MAT RC3
SITE 31

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
821032	356	D15	8.6	7.9	52.0	1.00	2.3	4.90	.25	5.80	3.66	6.44	ND	ND	ND	ND
821033	357	D30	8.7	7.8	51.3	2.30	5.0	15.40	.24	11.30	7.81	25.63	ND	ND	ND	ND
821034	358	D45	8.8	7.8	53.3	4.40	11.9	42.60	.29	9.40	16.28	53.44	ND	ND	ND	ND
821035	359	D60	8.1	8.0	53.3	6.40	18.4	73.00	.43	6.30	25.08	85.00	ND	ND	ND	ND
821036	360	D75	7.8	7.8	61.3	6.50	21.6	77.40	.49	4.30	21.38	85.00	ND	ND	ND	ND
821037	361	D90	8.8	8.5	70.9	8.80	17.6	97.40	.68	20.80	40.70	135.00	ND	ND	ND	ND
821038	362	D120	8.7	8.4	72.0	7.90	19.1	89.60	.59	14.50	29.60	111.25	ND	ND	ND	ND
821039	363	D150	8.7	8.5	91.3	6.60	22.1	80.80	.42	7.60	19.19	81.75	ND	ND	ND	ND
821040	364	D180	8.1	8.0	73.3	7.70	17.4	89.80	.59	22.00	31.50	113.88	ND	ND	ND	ND
821041	365	D210	8.3	8.1	68.0	7.60	17.2	88.10	.64	22.30	30.41	113.25	ND	ND	ND	ND
821042	366	D240	8.2	8.0	63.3	7.30	16.6	82.00	.57	21.70	27.07	105.06	ND	ND	ND	ND
821043	367	D270	8.1	8.0	66.7	7.60	17.5	87.00	.54	21.90	27.54	109.50	ND	ND	ND	ND
821044	368	D300	8.0	7.8	69.3	7.40	17.1	84.10	.54	22.60	25.56	105.81	ND	ND	ND	ND
821045	369	D330	8.7	7.9	69.3	7.30	17.0	80.40	.56	21.90	23.03	100.00	ND	ND	ND	ND
821046	370	D360	8.5	7.9	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

ANALYTICAL DATA FOR RECONSTRUCTED SOILS SAMPLED IN 1982.

MINE D
MAT RC3
SITE 32

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
821047	371	D15	8.0	7.5	56.0	2.85	.9	4.10	.88	27.20	17.01	37.88	ND	ND	ND	ND
821048	372	D30	8.6	7.7	53.3	2.95	1.1	5.30	.61	30.70	15.91	40.50	ND	ND	ND	ND
821049	373	D45	7.6	7.6	54.7	2.90	.8	4.00	.63	30.20	16.58	41.38	ND	ND	ND	ND
821050	374	D60	7.6	7.5	50.0	2.62	.9	4.20	.63	29.50	16.05	40.13	ND	ND	ND	ND
821051	375	D75	7.9	7.6	52.7	2.85	.9	4.00	.70	28.70	14.80	38.25	ND	ND	ND	ND
821053	377	D150	8.0	7.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
821054	378	D180	8.3	7.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
821055	379	D210	8.5	7.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
821056	380	D240	8.5	7.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
821057	381	D270	8.5	7.6	52.0	2.85	1.0	4.50	.73	29.20	15.84	39.81	ND	ND	ND	ND
821058	382	D300	8.6	7.7	42.7	3.68	5.4	24.10	.66	23.30	17.02	50.56	ND	ND	ND	ND

MINE D
MAT RC3
SITE 33

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
821059	383	D15	8.6	7.7	59.3	2.40	.9	3.80	.81	24.00	12.10	30.25	ND	ND	ND	ND
821060	384	D30	8.5	7.6	50.7	3.40	2.2	11.00	.85	28.80	20.39	47.63	ND	ND	ND	ND
821061	385	D45	8.5	7.8	53.3	4.10	3.0	16.40	.95	28.50	30.93	47.13	ND	ND	ND	ND
821062	386	D60	8.4	7.7	48.7	3.95	3.1	16.10	.93	27.70	27.89	56.44	ND	ND	ND	ND
821064	388	D90	8.7	7.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
821065	389	D120	8.6	7.7	50.0	3.85	3.4	17.20	.67	27.60	23.01	52.50	ND	ND	ND	ND
821067	391	D180	8.6	7.6	52.0	3.55	2.4	12.00	.74	27.80	22.52	49.50	ND	ND	ND	ND
821068	392	D210	8.5	7.7	58.0	3.60	2.4	12.40	.85	29.10	23.35	51.63	ND	ND	ND	ND
821069	393	D240	8.5	7.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
821963	387	D75	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

ANALYTICAL DATA FOR RECONSTRUCTED SOILS SAMPLED IN 1982.

MINE V
MAT RC2
SITE 10

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
82421	96	D15	7.3	7.1	200.0	6.00	25.3	71.30	.73	10.50	5.35	72.50	.60	20	45	35
82422	97	D30	7.8	7.7	220.0	4.10	33.2	51.30	.47	2.90	1.89	43.13	.25	21	43	36
82423	98	D45	8.0	7.9	200.0	4.05	32.7	51.30	.42	3.00	1.93	43.44	.75	32	35	33
82424	99	D60	5.9	5.8	163.3	8.20	24.6	101.70	.81	22.30	12.00	113.75	.17	23	41	36
82425	100	D75	7.7	7.7	175.3	6.90	25.0	85.20	.62	14.00	9.29	91.25	.50	19	45	36
82426	101	D90	7.8	7.8	180.0	5.50	27.6	61.70	.55	5.80	4.19	58.13	ND	16	48	36
82427	102	D120	7.8	7.8	133.3	7.40	28.4	99.10	.73	14.80	9.62	103.75	.75	14	57	29
82428	103	D150	7.9	8.0	146.0	6.90	36.3	88.70	.71	7.90	4.07	82.50	2.68	12	58	30
82429	104	D180	7.9	8.0	178.0	6.75	37.1	88.70	.69	7.30	4.11	82.50	1.34	22	49	29
82430	105	D210	8.7	8.5	242.0	2.85	49.8	35.00	.26	.60	.39	24.69	.59	8	55	37
82431	106	D240	8.2	8.1	230.0	4.25	37.6	53.90	.43	2.50	1.61	45.00	1.17	15	48	37
82432	107	D300	8.1	8.1	200.0	4.20	38.5	54.80	.47	2.60	1.46	45.00	.92	20	49	31

MINE V
MAT RC2
SITE 35

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
82608	283	D15	8.2	8.0	195.0	2.40	28.5	26.10	.23	1.30	.38	18.44	1.77	17	50	33
82609	284	D30	8.2	8.0	187.0	2.40	32.1	29.60	.26	1.30	.40	22.19	5.13	26	41	33
82610	285	D45	8.3	8.1	205.0	2.00	21.4	24.80	.19	2.20	.49	14.38	3.11	25	40	35
82611	286	D60	8.0	7.9	178.0	3.65	30.9	44.30	.37	3.30	.81	34.38	.76	15	47	38
82612	287	D75	8.3	8.1	250.0	1.65	17.3	19.10	.13	2.10	.33	9.69	1.60	16	50	34
82613	288	D90	8.2	8.0	200.0	2.25	27.6	27.20	.22	1.70	.25	17.19	1.43	10	54	36
82614	289	D120	8.5	8.2	265.0	1.40	22.0	15.70	.08	.90	.12	7.63	.76	34	34	32
82615	290	D150	8.2	8.0	220.0	2.00	23.9	23.30	.14	1.70	.20	12.81	.76	21	46	33
82616	291	D180	8.1	8.0	250.0	3.40	34.9	40.40	.33	2.20	.48	32.50	.50	23	44	33
82617	292	D210	8.1	8.1	305.0	5.60	24.0	63.50	.54	11.50	2.55	71.25	2.76	33	35	32
82618	293	D240	8.1	8.0	290.0	5.40	28.0	60.00	.44	7.10	2.06	62.50	ND	26	39	35
82619	294	D270	8.0	7.9	250.0	6.50	29.3	79.10	.55	11.30	3.25	83.75	.25	29	36	35
82620	295	D300	8.2	8.1	268.0	4.00	36.7	45.20	.35	2.20	.84	41.88	2.10	23	40	37

ANALYTICAL DATA FOR RECONSTRUCTED SOILS SAMPLED IN 1982.

MINE V
MAT RC2
SITE 36

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
82621	296	D15	8.1	8.0	225.0	3.65	35.1	43.30	.46	2.40	.65	37.19	1.43	17	46	37
82622	297	D30	8.3	8.1	240.0	2.10	29.2	23.00	.23	1.00	.24	14.69	3.53	26	40	34
82623	298	D45	8.3	8.1	223.0	2.85	35.7	32.60	.34	1.30	.37	25.00	2.10	20	47	33
82624	299	D60	8.4	8.2	285.0	1.72	27.9	18.90	.19	.70	.22	11.50	1.85	27	40	33
82625	300	D75	8.4	8.2	250.0	1.90	36.9	20.70	.18	.50	.13	13.13	4.83	33	38	29
82626	301	D90	7.9	7.7	225.0	2.72	34.5	30.20	.30	1.20	.33	23.44	5.68	34	37	29
82627	302	D120	7.9	7.7	200.0	4.10	32.2	47.80	.47	3.50	.90	42.19	3.48	30	39	31
82628	303	D150	8.2	7.9	200.0	3.10	34.7	36.50	.34	1.80	.41	28.75	3.14	20	48	32
82629	304	D180	8.1	8.0	200.0	2.50	36.2	29.30	.27	1.00	.31	20.31	2.46	13	52	35
82630	305	D210	8.3	8.1	245.0	2.15	34.9	23.30	.18	.70	.19	15.94	3.14	16	52	32
82631	306	D240	8.3	8.1	255.0	2.15	38.5	23.70	.18	.60	.16	16.25	3.22	11	55	34
82632	307	D270	8.4	8.2	255.0	1.80	39.6	19.80	.11	.40	.10	12.19	3.65	13	55	32
82633	308	D300	8.4	8.2	260.0	1.70	33.6	18.70	.12	.50	.12	12.25	4.66	21	48	31

MINE V
MAT RC2
SITE 37

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
82634	309	D15	7.6	7.5	210.0	3.70	29.0	42.80	.36	3.20	1.17	37.81	.76	22	45	33
82635	310	D30	7.3	7.4	180.0	4.35	29.6	53.00	.47	4.60	1.81	46.88	.68	25	44	31
82636	311	D45	7.7	7.6	230.0	3.85	28.3	43.50	.38	3.40	1.32	39.06	.68	16	46	38
82637	312	D60	7.7	7.6	220.0	3.35	35.0	40.20	.22	1.90	.74	33.75	.59	18	49	33
82638	313	D75	7.8	7.7	270.0	3.45	37.7	42.80	.23	1.90	.68	35.94	.42	13	49	38
82639	314	D90	7.8	7.7	250.0	3.80	35.2	44.30	.27	2.40	.76	37.81	.54	13	45	42
82640	315	D120	7.9	7.8	220.0	4.15	31.8	48.70	.34	3.50	1.19	42.50	1.27	16	51	33
82641	316	D150	7.7	7.7	200.0	4.85	30.7	59.10	.46	5.50	1.93	54.38	1.10	14	50	36
82642	317	D180	7.8	7.7	230.0	3.65	33.7	42.20	.30	2.30	.84	34.69	.68	23	44	33
82643	318	D210	7.8	7.8	220.0	4.90	34.6	60.90	.49	4.70	1.50	54.06	.59	17	49	34

ANALYTICAL DATA FOR RECONSTRUCTED SOILS SAMPLED IN 1982.

MINE V
MAT RC2
SITE 38

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
82644	319	D15	7.0	7.0	140.0	5.30	23.1	62.60	.44	10.50	4.19	62.19	.59	17	52	31
82645	320	D30	7.7	7.5	145.0	4.25	26.7	49.60	.32	4.50	2.38	41.88	1.18	16	53	31
82646	321	D45	8.1	7.9	205.0	2.45	28.3	26.50	.10	1.10	.66	18.44	2.62	15	50	35
82647	322	D60	8.1	8.0	205.0	2.32	29.8	25.40	.06	.90	.55	17.19	2.11	16	48	36
82648	323	D75	8.2	8.0	200.0	2.25	29.1	25.90	.07	1.00	.58	17.19	2.45	20	45	35
82649	324	D90	8.1	8.0	200.0	2.40	28.3	27.20	.08	1.20	.65	18.75	2.62	20	44	36
82650	325	D120	8.1	8.0	200.0	2.25	27.7	25.20	.04	1.10	.56	17.81	4.27	36	35	29
82651	326	D150	8.0	7.9	200.0	3.25	27.5	35.90	.11	2.10	1.32	29.38	3.10	27	40	33
82652	327	D180	8.0	7.9	184.0	2.70	26.1	29.30	.04	1.60	.93	23.44	1.84	39	34	27
82653	328	D210	7.8	7.8	182.0	4.25	22.7	47.00	.16	5.40	3.17	44.06	2.43	19	42	39
82654	329	D240	6.1	6.2	96.7	7.80	24.0	91.30	.49	19.80	9.13	80.00	ND	22	45	33
82655	330	D270	5.9	5.7	125.0	5.50	21.0	61.70	.36	11.80	5.43	60.00	.17	32	50	18
82656	331	D300	7.6	7.4	100.0	3.75	19.9	41.30	.20	5.20	3.41	30.94	5.20	19	42	39

MINE V
MAT RC3
SITE 2

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
82327	2	D15	7.4	7.2	47.2	.82	1.4	2.80	.42	6.00	2.27	3.62	ND	62	25	13
82328	3	D30	7.7	7.6	118.0	5.38	16.3	63.60	.67	22.30	8.30	73.56	2.00	33	42	25
82329	4	D45	7.5	7.5	56.5	4.32	8.1	35.80	.52	26.10	13.40	58.88	2.91	55	26	19
82330	5	D60	7.6	7.6	66.9	3.32	7.6	27.40	.51	16.00	10.06	40.38	4.37	47	32	21
82331	6	D75	7.7	7.6	66.7	2.52	8.9	23.10	.36	8.10	5.44	26.31	3.12	47	32	21
82332	7	D90	7.6	7.5	65.6	2.98	8.2	26.50	.48	13.20	7.63	36.00	3.12	47	32	21
82333	8	D120	7.5	7.5	67.0	4.30	7.9	35.80	.51	27.20	14.28	61.25	2.29	51	29	20
82334	9	D150	7.5	7.5	75.0	4.42	9.1	39.60	.50	23.70	14.54	61.38	1.87	49	32	19
82335	10	D180	7.6	7.6	75.0	4.72	9.9	44.00	.53	25.20	14.27	66.44	2.29	47	33	20
82336	11	D210	7.7	7.6	78.5	5.00	10.6	47.30	.48	24.50	15.36	69.00	2.50	49	31	20
82337	12	D240	7.6	7.6	100.0	5.10	12.4	50.80	.53	23.00	10.51	66.13	2.70	43	34	23
82338	13	D270	7.9	7.6	118.5	4.68	17.0	56.30	.57	16.30	5.59	60.25	4.49	45	34	21
82339	14	D300	8.4	8.2	121.5	2.25	31.7	28.70	.18	1.30	.34	19.81	3.99	54	23	23

ANALYTICAL DATA FOR RECONSTRUCTED SOILS SAMPLED IN 1982.

MINE V
MAT RC3
SITE 3

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
82340	15	D15	7.4	7.3	55.2	3.05	2.7	12.30	.48	28.50	12.76	41.19	1.75	53	28	19
82341	16	D30	7.5	7.4	59.6	4.30	8.7	37.80	.70	24.80	13.11	57.31	2.25	48	28	24
82342	17	D45	7.4	7.2	67.5	3.05	10.7	31.30	.35	10.60	6.41	34.50	.75	40	33	27
82343	18	D60	7.6	7.5	109.0	5.10	18.2	61.40	.59	16.10	6.77	64.81	2.00	32	40	28
82344	19	D75	7.9	7.8	147.3	4.15	29.8	57.30	.42	5.40	2.01	48.00	2.61	28	39	33
82345	20	D90	8.3	8.1	171.0	2.08	32.0	27.70	.10	1.20	.30	17.00	5.73	30	41	29
82346	21	D120	8.3	8.1	208.0	1.55	21.3	21.50	.15	1.70	.33	10.13	2.02	27	41	32
82347	22	D150	8.6	8.2	226.7	1.10	21.9	14.00	.00	.70	.12	6.31	2.61	44	31	25
82348	23	D180	8.6	8.3	194.8	1.15	29.0	14.20	.00	.40	.08	7.13	1.43	51	23	26
82349	24	D210	8.6	8.4	167.2	1.28	37.0	15.70	.07	.30	.06	7.94	5.26	53	23	24
82350	25	D240	8.2	8.0	127.5	1.68	29.1	21.80	.16	.80	.32	12.38	3.52	23	46	31
82351	26	D270	8.3	8.0	133.3	1.70	29.5	22.20	.18	.80	.33	12.31	3.36	8	54	38
82352	27	D300	8.2	8.0	133.3	1.85	27.9	23.90	.23	1.10	.37	14.50	3.45	26	43	31

MINE V
MAT RC3
SITE 4

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
82353	28	D15	7.8	7.4	48.0	1.20	8.3	11.90	.14	3.10	.99	4.69	2.53	59	27	14
82354	29	D30	7.8	7.8	137.1	5.10	24.2	64.60	.55	10.40	3.90	59.75	3.12	21	47	32
82355	30	D45	7.9	7.9	137.1	3.88	31.7	50.30	.34	3.70	1.33	37.69	2.61	27	46	27
82356	31	D60	7.9	7.8	134.4	3.50	31.9	47.20	.32	3.10	1.27	35.38	3.28	23	47	30
82357	32	D75	8.1	7.9	125.7	3.58	31.9	48.70	.36	3.20	1.46	36.69	3.54	21	48	31
82358	33	D90	7.9	7.8	125.7	3.95	25.6	51.90	.44	5.80	2.41	43.00	4.63	30	41	29
82359	34	D120	7.9	7.8	146.9	3.82	29.0	51.00	.37	4.50	1.69	40.75	2.69	21	47	32
82360	35	D150	7.9	7.8	132.5	4.05	28.6	54.80	.43	5.30	2.06	45.13	2.53	30	43	27
82361	36	D180	7.7	7.7	140.0	4.40	26.3	57.00	.44	6.90	2.48	49.00	2.53	26	43	31
82362	37	D210	7.7	7.7	162.5	5.20	28.6	71.30	.58	9.50	2.92	63.50	1.52	10	56	34
82363	38	D240	7.7	7.7	157.5	5.45	27.2	73.40	.54	11.10	3.48	67.13	1.52	16	53	31
82364	39	D270	7.9	7.9	161.0	4.60	33.7	64.40	.40	5.40	1.91	52.81	2.61	12	51	37
82365	40	D300	7.7	7.8	160.0	4.95	30.6	66.00	.47	6.90	2.43	55.69	2.53	16	51	33

ANALYTICAL DATA FOR RECONSTRUCTED SOILS SAMPLED IN 1982.

MINE V
MAT RC3
SITE 5

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
82366	41	D15	7.3	7.1	50.0	1.18	5.9	9.90	.18	4.10	1.50	3.79	.59	66	24	10
82367	42	D30	8.0	7.9	182.0	5.10	24.4	67.60	.54	10.40	4.93	62.94	2.19	26	42	32
82368	43	D45	8.1	8.0	193.3	3.65	29.9	46.40	.33	3.30	1.52	36.75	2.29	23	46	31
82369	44	D60	8.2	8.1	200.0	2.62	34.3	34.30	.20	1.40	.60	24.44	3.05	21	47	32
82370	45	D75	7.6	7.6	176.7	4.40	24.1	54.80	.47	7.60	2.77	48.13	2.54	20	46	34
82371	46	D90	7.9	7.9	172.7	3.50	28.6	48.10	.41	4.00	1.64	37.44	3.56	12	53	35
82372	47	D120	7.5	7.6	169.3	4.90	22.2	63.00	.67	12.20	3.88	58.63	2.28	7	59	34
82373	48	D150	8.0	7.9	162.7	3.60	26.1	45.00	.45	4.10	1.83	35.56	6.75	15	52	33
82374	49	D180	8.2	8.0	172.7	1.92	30.7	24.30	.13	.90	.35	14.63	4.98	29	44	27
82375	50	D210	8.2	8.1	162.0	2.00	31.7	26.40	.16	1.00	.39	16.63	4.05	18	50	32
82376	51	D240	8.3	8.1	133.3	1.50	30.2	20.60	.08	.70	.23	10.81	3.12	40	34	26
82377	52	D270	8.2	8.0	145.3	1.45	29.8	19.40	.08	.60	.25	8.31	7.51	33	43	24
82378	53	D300	8.3	8.1	146.7	1.30	30.1	18.40	.11	.50	.25	7.63	5.32	24	49	27

MINE V
MAT RC3
SITE 6

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
82379	54	D15	7.3	7.3	52.0	2.85	.7	3.30	.51	36.70	9.39	38.38	1.18	65	22	13
82380	55	D30	7.7	7.6	73.3	6.50	18.2	79.90	.68	24.20	14.54	93.31	.76	48	31	21
82381	56	D45	7.9	7.9	150.0	4.35	30.6	60.10	.53	5.50	2.20	49.56	2.02	18	46	36
82382	57	D60	7.5	7.6	149.3	5.40	31.1	77.90	.64	9.50	3.07	66.50	1.93	11	50	39
82383	58	D75	7.5	7.5	133.3	6.40	30.4	74.60	.61	9.10	2.94	63.00	2.01	16	49	35
82384	59	D90	7.6	7.6	133.3	6.90	29.3	91.20	.76	14.80	4.54	82.50	2.18	17	48	35
82385	60	D120	7.7	7.7	38.0	5.50	31.5	73.90	.58	8.40	2.59	61.75	2.10	13	51	36
82386	61	D150	7.2	7.2	133.3	4.55	34.6	63.50	.49	5.30	1.45	50.38	.84	8	61	31

ANALYTICAL DATA FOR RECONSTRUCTED SOILS SAMPLED IN 1982.

MINE V
MAT RC3
SITE 7

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
82387	62	D15	7.6	7.2	54.7	1.05	7.0	10.30	.31	3.10	1.23	4.37	1.51	39	40	21
82388	63	D30	7.9	7.6	133.3	2.82	19.1	34.40	.43	4.60	1.90	27.69	2.43	20	47	33
82389	64	D45	8.0	7.8	133.3	1.65	26.3	21.90	.16	1.00	.39	12.44	2.69	23	46	31
82390	65	D60	7.9	7.8	138.7	3.60	23.9	45.40	.45	5.20	1.99	37.94	3.94	27	43	30
82391	66	D75	7.8	7.7	141.3	4.05	25.8	51.60	.49	5.70	2.31	43.31	2.60	17	50	33
82392	67	D90	8.3	7.9	162.0	2.72	31.5	35.30	.28	1.70	.81	24.00	5.03	14	51	35
82393	68	D120	6.8	6.7	144.0	6.90	24.3	92.90	.89	22.80	6.35	96.63	2.43	14	54	32
82394	69	D150	6.7	6.7	142.7	6.70	26.6	93.00	.79	18.40	5.99	93.50	3.19	16	56	28

MINE V
MAT RC3
SITE 8

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
82395	70	D15	7.5	7.4	46.7	3.80	8.8	34.00	.48	22.10	8.12	48.94	1.51	63	23	14
82396	71	D30	7.9	7.8	160.0	4.60	31.0	62.40	.37	5.90	2.19	51.69	2.27	29	42	29
82397	72	D45	7.9	7.9	168.7	4.45	32.0	60.00	.40	5.30	1.75	48.88	2.01	24	48	28
82398	73	D60	8.1	8.0	200.0	2.45	38.4	36.20	.13	1.40	.38	23.56	1.51	18	49	33
82399	74	D75	8.2	8.0	208.0	2.68	39.6	38.00	.14	1.40	.44	25.25	1.76	18	49	33
82400	75	D90	7.4	7.6	158.0	5.40	33.9	80.60	.43	8.10	3.22	65.50	2.09	16	52	32
82401	76	D120	8.1	8.1	193.3	2.52	29.9	31.50	.26	1.70	.52	21.88	1.34	22	47	31
82402	77	D150	8.4	8.2	236.7	1.62	30.3	19.30	.18	.60	.21	11.44	1.31	18	49	33
82403	78	D180	8.7	8.3	280.0	1.00	22.5	11.70	.12	.40	.14	4.69	1.49	22	48	30
82404	79	D210	8.7	8.4	285.3	1.00	19.4	11.50	.13	.50	.20	4.63	1.22	25	42	33
82405	80	D240	8.7	8.4	266.7	1.25	22.3	13.00	.14	.50	.18	6.81	3.50	39	35	26
82406	81	D270	8.7	8.3	200.0	1.05	22.1	11.50	.12	.40	.14	6.00	1.57	64	16	20
82407	82	D300	8.3	8.1	166.7	1.80	27.8	20.90	.26	.80	.33	13.75	4.62	21	50	29

ANALYTICAL DATA FOR RECONSTRUCTED SOILS SAMPLED IN 1982.

MINE V
MAT RC3
SITE 9

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
82408	83	D15	7.8	7.5	66.7	2.75	19.0	31.30	.45	4.10	1.33	23.75	.74	60	26	14
82409	84	D30	8.1	7.9	230.0	2.55	31.8	30.70	.29	1.40	.46	22.19	1.49	21	46	33
82410	85	D45	7.9	7.9	200.0	3.40	32.4	41.50	.39	2.40	.68	32.19	2.45	27	43	30
82411	86	D60	8.0	7.9	200.0	2.50	28.5	33.50	.32	2.00	.77	23.13	2.80	24	45	31
82412	87	D75	8.0	7.9	220.0	2.90	33.8	34.80	.32	1.50	.62	26.56	1.84	25	41	34
82413	88	D90	7.9	7.9	200.0	3.25	30.1	39.30	.37	2.40	1.02	31.56	4.02	29	41	30
82414	89	D120	6.9	6.9	160.0	6.60	32.8	87.00	.67	10.80	3.25	83.75	1.22	23	46	31
82415	90	D150	6.9	6.8	200.0	4.15	33.7	57.40	.46	4.50	1.32	50.31	2.09	24	44	32
82416	91	D180	6.8	6.9	200.0	4.30	35.0	55.70	.44	4.00	1.07	47.81	1.31	28	43	29
82417	92	D210	7.1	7.1	200.0	4.50	34.5	56.50	.48	4.10	1.27	50.63	1.57	21	47	32
82418	93	D240	7.8	7.8	246.7	2.50	34.1	29.80	.27	1.20	.33	21.56	.70	26	41	33
82419	94	D270	4.7	4.6	242.7	6.90	22.4	81.70	.56	21.80	4.93	93.75	.70	24	41	35
82420	95	D300	6.8	6.5	206.7	5.25	35.0	64.30	.54	5.20	1.55	59.69	ND	16	51	33

MINE V
MAT RC3
SITE 11

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
82433	108	D15	7.4	7.2	74.0	2.75	18.5	32.40	.39	4.40	1.77	23.75	.67	47	36	17
82434	109	D30	8.6	8.3	233.3	1.70	27.9	20.20	.19	.80	.25	11.88	1.42	37	35	28
82435	110	D45	7.8	7.9	176.7	5.70	28.3	71.30	.64	9.70	2.96	67.50	1.00	17	55	28
82436	111	D60	7.7	7.6	133.3	6.70	32.8	86.10	.73	9.80	3.95	81.25	.33	14	57	29
82437	112	D75	7.3	7.2	133.3	7.50	27.5	95.70	.90	16.80	7.48	101.25	.59	15	51	34
82438	113	D90	6.9	6.9	140.0	7.40	28.7	94.80	.88	16.30	5.51	100.00	ND	13	61	26
82439	114	D120	8.1	8.0	201.3	4.70	30.8	59.10	.54	5.70	1.69	52.81	.76	19	51	30
82440	115	D150	8.2	8.1	200.0	3.10	33.8	38.00	.34	1.80	.73	29.06	.17	24	46	30
82441	116	D180	8.4	8.2	196.7	1.38	15.5	16.50	.14	1.60	.67	8.13	2.15	48	27	25
82442	117	D210	7.5	7.6	133.3	7.00	22.7	85.20	.72	19.50	8.63	95.00	.50	28	41	31
82443	118	D240	7.5	7.6	133.3	7.65	24.5	93.00	.79	20.00	8.80	102.50	1.43	12	57	31
82444	119	D300	7.6	7.6	133.3	7.30	24.3	91.30	.73	18.80	9.46	100.00	.12	14	51	35

ANALYTICAL DATA FOR RECONSTRUCTED SOILS SAMPLED IN 1982.

MINE V
MAT RC3
SITE 14

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
82467	142	D15	6.0	5.7	58.7	.32	3.1	3.70	1.12	1.90	.94	1.13	.25	58	31	11
82468	143	D30	7.3	7.5	60.0	5.00	11.1	47.00	.48	24.30	11.43	77.50	2.81	38	36	26
82469	144	D45	7.7	7.8	78.0	6.75	18.0	76.50	.51	23.00	13.16	106.25	2.81	34	39	27
82470	145	D60	7.6	7.8	80.0	6.10	22.4	73.90	.69	15.50	6.25	87.50	1.08	40	36	24
82471	146	D75	8.1	8.1	179.0	2.50	34.9	30.90	.44	1.30	.27	21.88	1.74	32	38	30
82472	147	D90	8.3	8.2	170.0	1.90	27.2	22.80	.28	1.30	.11	12.31	1.58	32	40	28
82473	148	D120	8.5	8.3	190.0	1.95	33.0	23.70	.28	.80	.23	18.13	1.74	56	20	24
82474	149	D150	8.0	8.0	130.0	4.15	25.4	52.20	.64	5.20	3.25	53.44	2.49	42	32	26
82475	150	D180	8.0	8.1	165.0	3.60	29.3	42.60	.60	2.60	1.64	39.38	1.16	29	40	31
82476	151	D210	8.3	8.3	170.0	2.42	32.0	29.10	.44	1.10	.55	22.19	3.07	25	37	38
82477	152	D240	8.0	8.0	100.0	5.30	21.9	60.90	1.04	10.80	4.69	67.50	3.90	22	48	30
82478	153	D270	8.1	8.0	110.7	4.45	22.6	53.90	.94	7.60	3.78	57.50	2.16	22	46	32
82479	154	D300	7.9	7.8	60.0	6.60	18.5	76.50	1.17	22.80	11.51	102.50	2.66	43	33	24

MINE V
MAT RC3
SITE 30

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
82556	231	D15	6.7	6.6	66.7	3.65	11.8	36.30	.39	11.00	7.89	49.38	ND	46	35	19
82557	232	D30	6.8	6.7	109.3	7.20	23.2	94.80	.90	23.50	9.95	115.00	.57	43	34	23
82558	233	D45	8.2	8.1	217.3	3.82	35.8	49.60	.46	2.80	1.04	46.25	1.96	38	32	30
82559	234	D60	8.9	8.5	335.0	1.35	32.1	15.70	.11	.40	.08	9.44	1.11	37	30	33
82560	235	D90	8.6	8.3	255.0	2.00	43.1	25.70	.20	.50	.21	17.19	.17	21	46	33
82561	236	D120	8.0	7.9	164.0	3.72	31.2	49.70	.39	3.90	1.17	42.50	1.02	33	38	29
82562	237	D150	8.7	8.3	260.0	1.15	28.0	13.70	.11	.40	.08	5.38	.84	35	38	27
82563	238	D180	8.6	8.3	260.0	1.45	32.8	17.80	.16	.50	.09	9.94	.85	29	42	29
82564	239	D210	8.5	8.3	225.0	1.70	30.8	21.70	.21	.80	.19	12.50	.67	29	39	32

ANALYTICAL DATA FOR RECONSTRUCTED SOILS SAMPLED IN 1982.

MINE V
MAT RC3
SITE 39

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
821101	425	D15	8.3	7.7	47.3	1.15	1.5	3.60	.40	8.10	3.74	8.75	ND	62	19	19
821102	426	D30	8.6	7.7	48.0	3.40	3.1	14.60	.54	26.80	16.37	48.44	ND	66	20	14
821103	427	D45	8.2	7.6	51.3	2.15	3.1	10.20	.47	13.80	8.39	25.63	ND	62	25	13
821104	428	D60	8.4	7.5	52.6	3.10	2.0	9.30	.59	30.00	12.09	45.63	ND	69	21	10
821105	429	D75	8.6	7.7	48.0	1.95	2.9	8.90	.56	12.80	6.66	19.38	ND	68	20	12
821106	430	D90	8.4	7.6	59.9	1.90	6.3	15.40	.47	8.40	3.50	18.44	ND	58	32	10
821107	431	D120	8.4	7.9	84.7	3.70	19.2	45.20	.53	8.60	2.47	46.25	ND	42	33	20
821108	432	D150	8.7	8.1	112.7	3.38	21.7	38.90	.47	4.80	1.61	35.63	ND	ND	ND	ND
821109	433	D180	8.4	8.0	94.4	4.25	19.8	47.80	.59	8.80	2.88	48.75	ND	30	42	28
821110	434	D210	8.9	8.3	113.3	2.75	26.3	33.90	.37	2.60	.72	29.38	ND	54	27	19
821112	436	D330	8.7	8.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

MINE V
MAT RC3
SITE 40

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
821113	437	D15	8.6	8.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
821114	438	D30	8.7	7.3	65.2	1.70	11.0	16.30	.21	3.30	1.13	11.94	ND	56	24	20
821115	439	D45	8.2	8.0	127.5	3.20	21.9	37.60	.42	4.60	1.32	36.56	ND	26	44	30
821116	440	D60	8.4	7.9	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
821117	441	D75	8.6	8.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
821119	443	D120	8.2	8.2	164.9	2.15	30.3	26.70	.23	1.25	.30	19.06	ND	11	67	22
821120	444	D150	8.5	8.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
821121	445	D180	8.4	8.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
821122	446	D210	8.7	7.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
821123	447	D300	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

ANALYTICAL DATA FOR RECONSTRUCTED SOILS SAMPLED IN 1982.

MINE V
MAT RC3
SITE 41

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
821124	448	D15	8.4	7.6	50.0	3.60	5.5	23.00	.33	24.30	10.77	52.81	ND	68	18	14
821125	449	D30	8.3	7.9	54.7	5.25	10.3	46.10	.60	24.00	16.45	80.00	ND	59	21	20
821126	450	D45	8.9	8.3	167.3	2.45	28.1	28.70	.24	1.60	.48	23.75	ND	54	26	20
821127	451	D60	8.7	8.1	153.3	3.20	24.2	38.30	.38	3.80	1.22	35.94	ND	32	40	28
821128	452	D75	8.7	8.0	140.0	3.80	22.5	46.10	.55	6.20	2.18	43.44	ND	24	46	30
821129	453	D90	8.8	8.0	163.0	4.80	17.6	58.30	.81	16.30	5.67	70.00	ND	ND	ND	ND
821130	454	D120	8.7	8.0	190.0	4.85	20.7	57.40	.60	11.00	4.36	60.94	ND	36	38	26
821131	455	D150	8.1	8.0	162.0	4.20	23.4	49.60	.47	7.20	1.81	47.50	ND	ND	ND	ND
821132	456	D180	9.2	8.5	234.0	1.22	23.2	13.50	.15	.50	.18	7.50	ND	30	42	28
821133	457	D210	8.7	8.2	146.7	2.65	26.6	31.30	.34	2.00	.76	23.13	ND	ND	ND	ND
821134	458	D240	8.5	7.9	100.0	5.75	17.3	64.30	.64	20.50	7.07	78.75	ND	38	38	24
821135	459	D270	8.4	8.3	160.0	4.15	20.3	47.80	.53	8.30	2.75	48.75	ND	31	40	29
821136	460	D300	8.1	8.0	190.0	3.60	24.1	42.00	.43	4.80	1.26	38.44	ND	32	40	28

MINE V
MAT RC3
SITE 42

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
821137	461	D15	8.4	7.4	50.0	2.35	3.6	12.20	.64	16.00	7.07	44.69	ND	ND	ND	ND
821138	462	D30	8.5	7.7	46.7	2.95	4.5	17.00	.64	20.50	8.55	37.50	ND	51	29	20
821139	463	D45	8.5	7.7	61.0	5.30	9.7	45.20	.86	23.80	19.74	77.50	ND	ND	ND	ND
821140	464	D60	8.6	7.9	55.7	5.30	10.2	47.00	.83	24.80	18.09	78.75	ND	ND	ND	ND
821141	465	D75	8.7	7.9	60.0	5.15	10.3	45.20	1.15	24.00	14.31	73.75	ND	ND	ND	ND
821143	467	D120	8.7	8.0	150.4	5.20	18.6	59.10	.81	16.30	3.95	66.25	ND	20	54	26
821144	468	D150	8.8	8.4	181.5	1.75	30.5	22.60	.27	.78	.32	12.81	ND	ND	ND	ND
821145	469	D180	9.1	8.4	206.1	1.35	24.6	17.60	.23	.68	.34	8.94	ND	ND	ND	ND
821146	470	D210	9.3	8.4	200.0	1.55	29.4	19.80	.24	.66	.25	10.50	ND	ND	ND	ND
821147	471	D240	9.1	8.4	125.0	1.82	30.1	23.70	.29	.91	.33	13.44	ND	ND	ND	ND
821148	472	D270	9.0	8.1	142.9	2.25	32.3	28.70	.32	1.20	.38	18.13	ND	ND	ND	ND
821149	473	D300	9.1	8.4	213.0	1.20	20.7	15.20	.23	.69	.39	6.75	ND	ND	ND	ND
821150	474	D330	9.3	8.5	188.7	1.10	22.0	14.10	.23	.54	.28	6.13	ND	ND	ND	ND

ANALYTICAL DATA FOR RECONSTRUCTED SOILS SAMPLED IN 1982.

MINE V
MAT RC4
SITE 15

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
82480	155	D15	6.6	6.6	56.7	.80	1.4	2.40	.82	4.70	1.64	1.09	.25	64	20	16
82481	156	D30	7.2	7.1	34.0	.85	2.4	4.00	1.85	4.10	1.46	3.63	.33	74	15	11
82482	157	D45	7.6	7.5	33.3	.68	2.1	2.80	2.03	2.60	.85	3.09	.25	83	7	10
82483	158	D60	7.8	7.7	36.7	1.15	4.2	7.10	.72	3.70	2.10	9.25	.84	78	9	13
82484	159	D75	7.8	7.7	46.7	1.40	4.7	9.10	.37	4.60	2.84	12.13	.84	74	10	16
82485	160	D90	7.8	7.8	43.3	1.45	5.4	9.80	.48	4.10	2.59	11.63	2.02	73	11	16
82486	161	D120	7.6	7.5	44.7	1.40	7.2	11.30	.38	2.70	2.26	9.94	.25	70	15	15
82487	162	D150	7.9	7.7	38.7	1.60	12.4	15.40	.29	1.90	1.18	10.88	.50	72	12	16
82488	163	D180	8.3	8.2	146.0	2.25	35.7	28.30	.31	1.00	.26	20.31	.59	37	36	27
82489	164	D210	8.8	8.6	250.0	1.00	28.2	12.60	.23	.40	.00	2.44	3.10	9	55	36
82490	165	D240	8.7	8.4	225.0	1.22	34.9	15.00	.21	.30	.07	4.06	3.86	15	52	33
82491	166	D270	8.9	8.7	300.0	.78	28.8	9.10	.14	.20	.00	1.59	1.17	35	32	33
82492	167	D300	8.7	8.6	240.0	.82	19.2	9.10	.11	.40	.05	1.41	.50	45	28	27

MINE V
MAT RC4
SITE 16

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
82493	168	D30	6.2	5.9	52.0	.35	1.1	1.30	.63	2.20	.58	1.56	.25	72	16	12
82494	169	D45	7.5	7.5	50.0	3.10	3.6	14.80	.64	23.00	11.18	45.00	4.37	68	14	18
82495	170	D60	6.8	6.8	48.7	3.80	5.7	23.90	.53	24.30	10.69	51.25	.67	65	22	13
82496	171	D75	7.4	7.5	40.0	4.00	6.4	27.00	.77	24.30	11.35	59.06	1.01	68	15	17
82497	172	D90	7.7	7.7	59.3	4.85	8.5	37.20	.65	24.30	14.14	71.25	4.03	47	29	24
82498	173	D120	7.6	7.6	39.3	5.50	11.1	51.30	.55	25.00	18.09	90.00	.59	80	10	10
82499	174	D150	8.1	8.1	133.3	4.65	24.8	53.90	.67	7.40	2.06	55.94	4.28	37	34	29
82500	175	D180	8.6	8.4	200.0	1.50	31.6	17.00	.18	.50	.08	8.06	.92	43	31	26

ANALYTICAL DATA FOR RECONSTRUCTED SOILS SAMPLED IN 1982

MINE V
MAT RC4
SITE 17

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
82501	176	D15	6.5	6.5	53.3	1.55	3.9	9.10	.73	7.90	2.92	15.00	.34	57	28	15
82502	177	D45	7.4	7.5	50.7	4.45	10.7	41.10	.51	18.00	11.27	65.00	2.02	56	23	21
82503	178	D60	7.8	7.7	54.0	6.30	14.2	62.60	.60	23.30	15.87	96.25	2.27	62	19	19
82504	179	D75	7.8	7.8	50.0	6.20	14.4	64.30	.60	23.30	16.45	98.75	2.10	61	22	17
82505	180	D90	7.7	7.8	46.0	5.25	10.3	45.20	.69	24.00	14.72	77.50	3.19	61	21	18
82506	181	D120	7.5	7.5	52.7	4.30	5.8	24.30	.60	23.50	12.17	63.75	2.35	56	23	21
82507	182	D150	7.9	7.8	110.0	6.30	17.7	65.20	.91	21.80	5.43	97.50	2.94	38	34	28
82508	183	D180	8.3	8.2	190.0	2.35	37.7	25.40	.22	.80	.11	20.00	2.77	23	43	34
82509	184	D210	8.4	8.3	213.3	1.80	37.0	18.50	.13	.50	.00	11.75	2.10	14	55	31
82510	185	D240	8.8	8.5	265.3	1.00	31.0	9.80	.00	.20	.00	2.63	2.18	12	51	37

MINE V
MAT RC4
SITE 18

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
82511	186	D15	7.6	7.4	46.0	1.30	5.6	8.90	.15	3.60	1.50	9.75	1.01	54	29	17
82512	187	D30	7.4	7.4	44.0	2.80	5.4	16.30	.63	13.50	4.93	35.00	.92	74	14	12
82513	188	D45	7.2	7.3	43.3	2.35	4.1	11.70	.91	11.00	5.43	27.19	.67	74	11	15
82514	189	D60	7.7	7.7	40.0	4.10	5.8	24.30	.63	22.50	12.09	62.50	.92	74	11	15
82515	190	D75	7.8	7.7	56.7	5.40	11.8	47.00	.69	22.00	9.62	82.50	1.51	64	17	19
82516	191	D90	8.5	8.3	200.0	1.80	31.2	16.50	.04	.50	.06	12.50	3.02	4	55	41
82517	192	D120	8.6	8.3	195.0	1.35	27.7	12.40	.00	.40	.00	7.19	3.28	4	59	37
82518	193	D150	8.6	8.2	185.0	1.25	25.7	11.50	.00	.40	.00	5.81	3.95	13	54	33
82519	194	D180	8.5	8.2	183.0	1.30	27.3	12.20	.00	.40	.00	5.88	3.32	10	55	35
82520	195	D210	8.6	8.3	180.0	1.20	25.3	11.30	.00	.40	.00	5.06	3.67	ND	ND	ND
82521	196	D240	8.8	8.3	173.0	1.32	26.8	12.00	.03	.40	.00	4.44	6.13	7	55	38
82522	197	D270	8.6	8.3	158.0	1.28	27.7	12.40	.04	.40	.00	4.63	5.28	10	56	34

ANALYTICAL DATA FOR RECONSTRUCTED SOILS SAMPLED IN 1982.

MINE V
MAT RC4
SITE 19

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
82523	198	D15	5.9	5.7	55.3	1.25	1.4	3.30	1.04	8.40	3.37	6.56	.43	56	31	13
82524	199	D30	7.8	7.7	70.0	5.25	11.6	44.30	.59	16.00	13.32	80.00	1.44	42	32	26
82525	200	D45	7.9	7.8	66.7	7.30	15.5	72.20	.78	21.50	21.79	125.00	2.29	43	32	25
82526	201	D60	8.0	8.0	72.7	7.85	18.2	81.70	.71	20.50	19.74	131.25	3.31	41	33	26
82527	202	D75	7.7	7.7	66.7	5.60	13.7	60.90	.47	23.00	16.45	91.25	3.31	41	30	29
82528	203	D90	7.3	7.3	66.7	3.85	7.2	26.50	.31	16.30	11.10	53.44	.94	39	32	29
82529	204	D120	7.7	7.7	56.7	5.55	10.5	47.00	.47	22.80	17.68	91.25	2.72	45	29	26
82530	205	D150	7.7	7.7	71.3	5.60	11.5	47.80	.54	22.00	12.66	86.25	2.70	41	33	26
82531	206	D180	8.1	8.0	153.0	4.25	25.4	46.10	.45	5.20	1.38	51.88	2.96	26	42	32
82532	207	D210	8.0	7.9	100.0	6.20	15.2	60.90	.65	20.30	11.76	98.75	2.28	43	32	25
82533	208	D240	8.2	8.1	150.0	4.85	21.7	49.60	.50	7.70	2.71	60.63	3.55	41	34	25
82534	209	D270	8.3	8.1	142.7	2.50	30.7	23.90	.16	1.00	.21	19.38	12.42	21	51	28
82535	210	D300	8.5	8.3	205.0	1.78	34.8	17.40	.05	.50	.00	11.25	2.37	19	49	32

MINE V
MAT RC4
SITE 20

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
82536	211	D15	7.7	7.5	48.0	2.40	6.6	17.40	.28	10.30	3.78	27.81	1.69	66	22	12

MINE V
MAT RC4
SITE 21

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
82537	212	D15	7.4	7.4	44.7	2.35	3.1	10.40	.55	16.50	6.00	31.25	.76	62	25	13

ANALYTICAL DATA FOR RECONSTRUCTED SOILS SAMPLED IN 1982.

MINE V
MAT RC4
SITE 22

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
82538	213	D15	7.2	7.0	50.7	1.80	6.2	12.60	.29	6.20	1.97	15 94	.42	55	31	14

MINE V
MAT RC4
SITE 23

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
82539	214	D30	7.4	7.3	33.3	1.92	3.2	8.90	17	11 50	3 74	23 13	42	86	8	6

MINE V
MAT RC4
SITE 24

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
82540	215	D30	7.6	7.5	33.3	4.05	5.0	21.50	26	24 30	12.34	60.31	.51	80	12	8

MINE V
MAT RC4
SITE 25

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
82541	216	D30	7.6	7.6	52.0	5 00	8.2	35.00	31	21 00	15 54	75 00	2 28	47	28	25

MINE V
MAT RC4
SITE 26

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
82542	217	D15	6.8	6.4	40.0	1 00	8.4	7.90	.06	1 40	36	5.81	.42	ND	ND	ND

ANALYTICAL DATA FOR RECONSTRUCTED SOILS SAMPLED IN 1982.

MINE V
MAT RC4
SITE 27

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
82543	218	D15	7.0	7.0	53.3	2.20	6.0	16.70	.95	10.50	5.02	22.50	.93	50	35	15
82544	219	D30	7.8	7.8	110.0	6.60	18.6	73.00	1.04	21.30	9.54	102.50	.42	35	34	31
82545	220	D45	8.4	8.2	230.0	1.55	24.0	17.40	.39	.80	.25	7.63	1.44	35	34	31
82546	221	D60	8.8	8.4	265.0	.90	22.3	10.20	.27	.30	.12	1.41	.51	35	36	29
82547	222	D90	8.9	8.4	300.0	.90	19.9	9.10	.22	.30	.12	1.44	.85	39	34	27
82548	223	D120	9.2	8.6	325.0	.75	18.1	6.90	.21	.20	.09	1.03	.34	43	31	26
82549	224	D150	8.6	8.3	278.0	1.15	24.3	12.60	.26	.40	.14	1.78	1.02	43	32	25
82550	225	D180	7.1	6.8	138.0	1.42	29.7	17.20	.19	.50	.17	3.88	ND	63	22	15

MINE V
MAT RC4
SITE 28

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
82551	226	D15	7.5	7.2	48.7	.95	3.5	5.40	.53	3.50	1.27	3.94	.42	47	43	10
82552	227	D30	8.0	7.9	150.0	4.70	24.1	55.70	.63	7.80	2.88	62.50	1.43	30	35	35
82553	228	D45	8.5	8.2	245.0	1.58	28.1	18.50	.33	.70	.17	10.13	1.44	31	38	31

MINE V
MAT RC4
SITE 29

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
82554	229	D15	7.0	7.0	56.7	1.55	7.6	12.40	.60	3.70	1.58	5.06	.50	52	35	13
82555	230	D45	8.3	8.1	220.0	1.92	27.4	22.00	.34	1.00	.29	16.88	3.16	26	41	33

ANALYTICAL DATA FOR RECONSTRUCTED SOILS SAMPLED IN 1982.

MINE V
MAT RC4
SITE 33

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
82590	265	D15	6.5	6.2	58.0	.65	3.6	4.20	.39	1.90	.81	4.63	.17	46	41	13
82591	266	D30	7.2	7.2	55.3	6.10	14.4	64.30	.68	26.50	13.49	93.75	.67	45	32	23
82592	267	D45	7.4	7.4	54.7	5.75	12.9	57.40	.65	26.30	13.57	88.75	.25	47	32	21
82593	268	D60	7.5	7.5	54.0	5.30	13.6	53.90	.44	20.00	11.35	75.00	.67	46	35	19
82594	269	D75	8.0	8.0	60.0	4.10	23.2	50.40	.53	4.50	4.93	49.38	2.44	42	37	21
82595	270	D90	7.5	7.4	60.0	6.00	13.3	59.10	.64	23.30	16.28	87.50	1.01	50	29	21
82596	271	D120	8.3	8.1	205.0	1.95	38.5	23.70	.20	.60	.16	12.19	3.37	18	44	38
82597	272	D150	8.4	8.3	270.0	1.65	36.9	20.40	.18	.50	.11	10.13	3.06	11	44	45

MINE V
MAT RC4
SITE 34

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
82598	273	D15	7.3	7.3	73.3	3.70	5.2	22.20	.76	25.80	11.18	50.94	.68	47	22	31
82599	274	D30	7.7	7.7	66.7	6.00	13.6	58.30	.64	22.80	13.82	87.50	3.15	43	33	24
82600	275	D45	7.7	7.7	66.7	6.10	13.7	60.00	.65	23.00	15.63	90.00	3.66	42	33	25
82601	276	D60	7.5	7.5	53.3	3.70	5.3	22.40	.60	24.50	10.94	52.81	2.72	42	33	25
82602	277	D75	7.1	7.0	53.3	2.05	6.4	15.70	.50	8.30	3.82	19.38	.77	46	30	24
82603	278	D90	7.6	7.7	72.0	8.20	19.9	93.00	.71	23.00	20.56	122.50	2.55	44	31	25
82604	279	D120	8.1	8.0	73.3	9.60	22.8	112.20	.92	23.30	25.08	143.75	3.23	44	32	24
82605	280	D150	8.3	8.2	220.0	3.15	37.7	35.20	.30	1.30	.44	26.56	2.27	19	50	31
82606	281	D180	8.5	8.3	250.0	1.45	33.2	16.10	.13	.40	.07	5.44	3.11	28	39	33
82607	282	D210	8.7	8.3	300.0	1.10	27.6	11.70	.08	.30	.06	3.69	2.35	45	31	24

MINE V
MAT RC5
SITE 1

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
82326	1	D15	7.3	6.9	90.0	.35	1.1	1.20	.00	2.10	.43	1.27	ND	93	5	2

ANALYTICAL DATA FOR RECONSTRUCTED SOILS SAMPLED IN 1982.

MINE V
MAT RC5
SITE 12

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
82445	120	D30	7.6	7.2	91.3	.95	6.5	7.60	.51	2.10	.65	3.56	.42	86	12	2
82446	121	D45	8.3	8.0	200.0	2.20	30.0	31.50	.78	1.40	.81	22.50	3.63	18	48	34
82447	122	D60	7.2	7.2	175.0	4.75	37.3	70.40	1.18	5.70	1.42	65.00	1.07	13	55	32
82448	123	D75	8.2	8.0	180.0	2.68	38.5	38.00	.87	1.30	.65	26.88	.66	14	56	30
82449	124	D90	8.4	8.2	196.0	2.50	36.6	34.30	.83	1.10	.66	24.38	2.23	9	56	35
82450	125	D120	8.5	8.3	197.0	2.50	35.5	35.40	.82	1.30	.69	26.25	3.88	18	52	30
82451	126	D150	8.2	8.2	200.0	2.25	31.0	30.90	.74	1.40	.59	23.44	1.90	10	52	38
82452	127	D180	8.4	8.3	210.0	1.95	34.1	27.40	.73	.80	.49	18.13	3.05	18	47	35
82453	128	D210	8.6	8.3	235.0	1.50	32.4	21.50	.73	.50	.38	10.31	3.88	15	52	33
82454	129	D240	8.7	8.4	274.0	1.25	28.1	17.20	.65	.40	.35	8.06	2.39	30	39	31

MINE V
MAT RC5
SITE 13

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
82455	130	D15	7.7	7.1	100.0	.65	8.9	8.40	.78	1.20	.57	2.03	.25	90	8	2
82456	131	D30	8.3	8.2	245.0	1.18	20.2	17.40	.63	1.00	.49	7.69	3.05	14	53	33
82457	132	D45	8.3	8.2	218.0	1.62	28.4	23.70	.69	.90	.49	13.75	2.89	14	51	35
82458	133	D75	7.8	7.8	183.0	2.90	32.6	38.00	.85	1.90	.81	30.94	2.73	25	45	30
82459	134	D90	7.3	7.7	178.0	2.85	33.2	39.60	.86	2.00	.85	30.31	2.23	22	50	28
82460	135	D120	8.4	8.1	184.0	1.50	26.2	20.70	.67	.80	.45	11.94	7.36	36	40	24
82461	136	D150	7.9	7.9	160.0	4.40	28.7	60.00	1.18	6.50	2.22	59.69	3.97	14	52	34
82462	137	D180	8.5	8.3	200.0	1.65	33.1	23.50	.85	.60	.41	11.50	5.21	11	55	34
82463	138	D210	8.4	8.2	215.0	1.60	32.1	21.30	.72	.50	.38	10.81	4.55	8	58	34
82464	139	D240	8.4	8.3	252.0	1.85	31.5	23.70	.69	.70	.43	15.63	3.06	28	39	33
82465	140	D300	8.3	8.1	205.0	1.45	25.3	18.90	.68	.70	.42	9.63	2.73	24	47	29
82466	141	D330	8.5	8.2	237.0	1.12	23.5	15.70	.62	.50	.39	6.00	2.65	22	48	30

ANALYTICAL DATA FOR RECONSTRUCTED SOILS SAMPLED IN 1982.

MINE V
MAT RC5
SITE 31

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
82565	240	D15	8.0	7.6	66.7	1.10	7.0	10.00	.87	3.10	1.00	4.56	1.02	ND	ND	ND
82566	241	D30	7.6	7.4	210.0	3.85	29.6	53.90	.38	4.50	2.14	51.56	2.35	ND	ND	ND
82567	242	D45	8.2	7.9	240.0	1.55	21.9	19.30	.17	1.10	.46	11.94	2.74	ND	ND	ND
82568	243	D60	8.1	7.8	220.0	1.78	21.3	23.50	.20	1.70	.73	14.38	2.52	92	6	2
82569	244	D75	8.1	7.9	200.0	1.92	22.4	26.10	.21	1.90	.81	16.88	1.63	ND	ND	ND
82570	245	D90	8.1	7.9	200.0	2.00	27.6	27.60	.22	1.40	.60	19.69	3.86	ND	ND	ND
82571	246	D120	8.0	7.8	225.0	1.65	21.8	19.80	.15	1.20	.45	12.44	4.71	ND	ND	ND
82572	247	D150	8.2	7.9	200.0	1.45	21.5	17.00	.13	.90	.35	10.25	3.60	ND	ND	ND
82573	248	D180	8.0	7.7	180.0	1.65	15.9	19.80	.17	2.30	.80	10.75	4.03	ND	ND	ND
82574	249	D210	7.3	7.2	80.0	6.50	20.2	78.30	.69	21.50	8.63	31.25	1.54	ND	ND	ND
82575	250	D240	7.5	7.5	80.0	5.42	20.0	64.30	.62	15.00	5.59	71.25	3.34	ND	ND	ND
82576	251	D270	8.1	7.7	200.0	1.38	18.4	16.50	.14	1.20	.41	10.19	3.17	ND	ND	ND
82577	252	D300	7.9	7.6	179.0	1.85	20.0	22.60	.17	2.00	.55	15.31	2.74	ND	ND	ND

MINE V
MAT RC5
SITE 32

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
82578	253	D15	7.9	7.3	90.0	1.10	13.7	11.50	.27	1.10	.31	7.19	.25	ND	ND	ND
82579	254	D30	8.0	7.7	196.8	1.65	28.1	20.00	.18	.80	.21	12.81	ND	40	34	26
82580	255	D45	8.6	8.3	250.0	1.00	23.7	11.50	.09	.40	.07	5.94	.85	65	16	19
82581	256	D60	8.4	8.2	230.0	1.65	35.7	18.90	.14	.40	.16	11.94	3.13	22	48	30
82582	257	D75	8.5	8.3	250.0	1.65	36.8	19.10	.16	.40	.14	12.44	2.79	22	47	31
82583	258	D90	8.0	7.9	168.0	3.20	35.1	40.20	.34	2.00	.63	35.94	.59	36	32	32
82584	259	D120	8.2	8.0	158.0	2.90	39.2	36.70	.30	1.30	.45	29.38	1.94	36	38	26
82585	260	D150	8.4	8.1	165.0	2.05	38.7	25.20	.25	.60	.25	17.19	3.30	3	56	41
82586	261	D180	8.4	8.0	238.0	1.70	34.6	21.30	.16	.60	.16	14.69	2.64	25	47	28
82587	262	D210	8.4	8.1	230.0	2.00	34.8	23.50	.18	.70	.21	18.13	2.11	43	29	28
82588	263	D240	8.1	7.9	210.0	2.60	38.7	32.40	.24	1.10	.30	24.69	1.01	37	36	27
82589	264	D270	7.2	7.0	177.0	5.75	33.2	79.10	.64	8.90	2.47	80.00	.34	21	49	30

ANALYTICAL DATA FOR RECONSTRUCTED SOILS SAMPLED IN 1982.

MINE H
MAT RC4
SITE 1

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
8201	1	D15	5.1	5.0	64.8	.35	1.3	.72	.09	.54	.07	.63	ND	19	44	37
8202	2	D30	5.2	5.2	111.2	.35	2.9	1.13	.05	.30	.00	1.15	ND	7	20	73
8203	3	D45	7.0	6.8	62.8	1.60	2.3	5.61	.56	9.85	2.38	14.38	.09	19	48	33
8204	4	D60	5.9	5.8	62.8	2.05	2.1	6.09	.78	13.50	2.84	23.13	ND	ND	ND	ND
8205	5	D75	6.0	5.9	60.8	2.00	4.4	10.22	.73	8.70	1.93	20.31	ND	33	41	26
8206	6	D90	6.6	6.5	64.4	3.35	4.3	15.87	.92	21.50	5.26	41.88	ND	33	43	24
8207	7	D120	6.4	6.3	65.6	3.50	3.5	15.22	.87	32.25	6.33	44.69	ND	30	42	28

MINE H
MAT RC4
SITE 2

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
8208	8	D15	5.3	5.0	46.7	.52	2.9	1.70	.08	.69	.00	.97	ND	ND	ND	ND
8209	9	D30	5.0	4.5	43.3	.45	10.5	2.35	.01	.10	.00	.83	ND	ND	ND	ND
8210	10	D45	7.4	7.1	61.5	1.00	5.8	7.00	.09	2.25	.64	3.03	.43	ND	ND	ND
8211	11	D75	6.7	6.6	96.7	3.25	20.5	33.26	.27	4.50	.76	31.88	.09	30	41	29
8212	12	D90	6.6	6.5	84.2	4.70	15.9	45.22	.49	14.00	2.14	55.63	.09	ND	ND	ND
8213	13	D120	7.0	6.7	70.8	3.82	17.7	37.00	.42	7.60	1.13	37.50	.17	33	42	25
8214	14	D180	6.9	6.7	73.2	3.88	15.7	36.09	.46	9.15	1.48	40.63	.17	ND	ND	ND
8215	15	D240	7.1	6.6	71.0	3.00	16.8	28.91	.49	5.20	.72	26.56	.43	18	55	27
8216	16	D300	7.0	6.7	72.0	3.38	16.5	32.17	.48	6.65	.98	30.31	.09	ND	ND	ND
8217	17	D360	6.1	5.9	65.2	2.55	13.7	22.83	.33	4.80	.72	25.00	ND	35	43	22
8218	18	D420	6.1	5.9	62.4	2.50	8.2	18.48	.44	8.60	1.63	25.31	ND	27	46	27
8219	19	D480	6.2	6.0	66.0	1.55	7.3	12.17	.34	4.45	1.10	15.94	ND	9	52	39
8220	20	D510	5.4	5.1	59.6	1.35	6.7	9.35	.23	3.10	.81	11.81	ND	33	45	22

ANALYTICAL DATA FOR RECONSTRUCTED SOILS SAMPLED IN 1982.

MINE H
MAT RC4
SITE 3

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
8221	21	D15	5.2	4.6	59.6	.43	ND	3.26	.00	.00	.00	.92	ND	31	42	27
8222	22	D30	5.2	4.4	56.0	.33	ND	2.52	.00	.00	.00	.74	ND	34	46	20
8223	23	D45	5.0	4.6	47.6	.30	ND	1.39	.01	.00	.00	.73	ND	50	22	28
8224	24	D60	5.3	5.0	49.6	.45	2.9	2.00	.06	.78	.16	1.94	ND	33	37	30
8225	25	D75	5.8	5.7	59.2	2.40	9.2	19.78	.27	7.20	2.01	25.63	ND	32	43	25
8226	26	D90	7.0	6.8	78.0	3.30	18.0	32.60	.39	5.80	.79	32.50	.26	26	46	28
8227	27	D120	7.5	7.1	88.4	2.25	23.6	23.04	.28	1.83	.07	18.13	.26	ND	ND	ND
8228	28	D150	8.0	7.6	72.4	1.95	27.6	20.43	.27	1.10	.00	13.75	8.35	42	37	21

MINE H
MAT RC4
SITE 4

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
8229	29	D15	6.7	6.4	63.3	.91	1.7	2.96	.12	4.40	1.50	.84	ND	ND	ND	ND
8230	30	D30	7.6	7.1	63.3	.62	2.9	3.17	.04	1.85	.58	1.28	.86	ND	ND	ND
8231	31	D45	7.4	7.1	70.7	.75	3.6	4.43	.05	2.33	.74	1.94	.82	ND	ND	ND
8232	32	D60	5.9	5.5	102.0	.88	8.0	6.74	.04	1.18	.25	6.00	ND	ND	ND	ND
8233	33	D75	7.4	6.9	93.3	1.65	24.9	16.96	.19	.93	.00	12.19	.17	22	45	33
8234	34	D90	7.2	6.8	95.3	2.48	23.7	24.78	.34	1.98	.21	22.50	ND	22	49	29
8235	35	D120	6.0	5.8	103.3	3.55	19.4	35.43	.41	5.55	1.09	37.81	ND	ND	ND	ND
8236	36	D150	7.4	6.8	103.6	1.88	29.0	18.70	.19	.83	.00	13.44	ND	16	50	34
8237	37	D180	6.0	5.8	86.0	3.00	28.4	34.35	.27	2.60	.32	30.63	ND	ND	ND	ND
8238	38	D210	5.7	5.6	78.5	5.00	23.2	55.65	.41	10.00	1.54	60.00	ND	ND	ND	ND
8239	39	D240	7.0	6.7	111.3	1.69	32.4	15.87	.16	.48	.00	11.75	ND	ND	ND	ND
8240	40	D270	7.0	6.6	105.0	1.25	44.5	13.70	.14	.19	.00	9.25	.09	18	39	43
8241	41	D300	6.3	6.0	89.5	1.65	35.4	17.17	.17	.47	.00	13.41	ND	20	39	41
8242	42	D330	6.4	6.0	85.0	1.55	49.7	16.09	.11	.21	.00	10.25	ND	ND	ND	ND

ANALYTICAL DATA FOR RECONSTRUCTED SOILS SAMPLED IN 1982.

MINE H
MAT RC4
SITE 5

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
8243	43	D15	5.7	5.3	64.0	.38	26.3	15.87	.00	.73	.00	.57	ND	ND	ND	ND
8244	44	D30	6.8	6.5	56.7	.78	4.1	5.09	.03	2.43	.66	1.25	.34	ND	ND	ND
8245	45	D45	7.5	7.2	75.0	.65	5.4	4.65	.04	1.20	.27	1.81	1.03	ND	ND	ND
8246	46	D60	7.4	7.0	70.3	1.35	9.7	12.39	.08	2.48	.78	8.19	.73	35	31	34
8247	47	D75	7.7	7.4	103.4	3.65	21.8	40.22	.39	5.80	.99	37.81	.30	29	42	29
8248	48	D90	8.2	7.9	114.3	3.10	32.7	32.60	.27	1.80	.19	25.94	.34	36	37	27
8249	49	D120	8.4	8.0	134.5	1.85	43.1	20.43	.18	.45	.00	12.13	.26	30	43	27
8250	50	D150	7.9	7.6	120.0	3.78	28.8	46.09	.39	4.50	.61	40.00	.43	24	47	29
8251	51	D180	8.1	7.8	120.0	3.55	29.7	43.48	.37	3.70	.58	37.50	.21	29	44	27
8252	52	D210	8.1	7.8	120.0	3.35	3.3	3.83	.30	2.48	.28	30.94	.43	19	51	30
8253	53	D240	9.6	9.3	70.0	4.15	32.7	48.70	.38	4.45	.00	43.75	3.35	37	52	11
8254	54	D270	10.0	9.5	68.0	4.10	41.2	51.30	.51	3.10	.00	43.44	3.09	ND	ND	ND
8255	55	D300	10.0	9.5	67.5	4.25	44.6	51.30	.55	2.65	.00	43.13	3.01	ND	ND	ND
8256	56	D330	9.7	9.4	104.0	3.32	34.2	39.78	.30	2.70	.00	34.06	1.55	35	45	20

ANALYTICAL DATA FOR RECONSTRUCTED SOILS SAMPLED IN 1982.

MINE H
MAT RC4
SITE 6

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
8257	57	D15	6.5	5.7	66.7	.55	3.5	3.17	.03	1.30	.32	1.53	ND	38	38	24
8258	58	D30	5.6	5.4	66.7	.50	2.9	2.83	.07	1.43	.51	1.75	ND	37	32	31
8259	59	D45	7.4	7.2	73.1	1.60	7.1	13.26	.19	5.20	1.77	14.06	1.20	39	29	32
8260	60	D60	7.8	7.5	85.7	2.31	18.0	23.48	.28	2.90	.50	19.38	.90	45	34	21
8261	61	D75	7.9	7.7	100.0	1.95	19.2	20.43	.29	1.95	.31	15.31	1.93	53	26	21
8262	62	D90	7.9	7.6	94.3	2.02	18.3	23.04	.31	2.70	.48	17.81	2.23	51	28	21
8263	63	D120	8.1	7.7	83.5	2.35	20.5	27.39	.31	3.15	.43	22.19	2.65	43	35	22
8264	64	D150	7.4	7.2	80.0	3.20	20.7	35.65	.31	5.40	.52	31.56	.51	22	49	29
8265	65	D180	7.6	7.2	80.0	2.70	22.8	30.00	.32	3.30	.17	24.06	.09	17	55	28
8266	66	D210	7.2	6.8	80.0	3.82	17.7	38.26	.37	8.40	1.00	40.00	.09	30	45	25
8267	67	D240	7.3	7.0	80.0	4.65	14.9	46.96	.55	17.75	2.22	57.81	.30	32	43	25
8268	68	D270	7.2	6.9	87.6	4.40	13.6	42.61	.67	17.25	2.26	54.69	.30	24	49	27
8269	69	D300	6.9	6.7	84.8	4.35	15.4	45.22	.51	15.25	1.97	54.38	.34	27	45	28
8270	70	D330	6.5	6.2	80.0	5.10	13.4	50.43	.56	24.75	3.66	71.25	ND	42	35	23
8271	71	D360	7.5	7.2	72.0	3.30	22.6	37.83	.33	5.05	.54	32.50	.30	20	53	27
8272	72	D390	7.7	7.4	68.8	3.70	19.0	41.09	.43	8.25	1.15	40.00	1.24	35	37	28
8273	73	D420	7.6	7.3	70.8	3.90	21.2	42.61	.43	7.05	1.07	39.06	.43	19	52	29

ANALYTICAL DATA FOR RECONSTRUCTED SOILS SAMPLED IN 1982.

MINE H
MAT RC4
SITE 7

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
8274	74	D15	5.0	4.6	76.0	1.05	8.3	7.48	.04	1.33	.30	6.88	ND	32	39	29
8275	75	D30	5.2	4.9	72.0	1.82	8.5	15.65	.21	5.05	1.81	20.00	ND	29	47	24
8276	76	D45	7.3	7.2	120.0	3.95	7.3	28.91	.64	25.75	6.09	55.00	.43	38	37	25
8277	77	D60	6.4	6.2	68.0	4.30	8.8	34.35	.69	25.25	5.43	58.44	ND	28	47	25
8278	78	D75	6.2	6.0	80.0	4.00	8.9	32.61	.56	22.25	4.52	54.06	ND	32	40	28
8279	79	D90	6.8	6.5	63.2	4.35	9.0	36.30	.64	27.50	5.02	56.88	.56	35	42	23
8280	80	D120	6.5	6.4	72.5	4.05	7.5	29.57	.63	25.50	5.92	54.69	ND	32	40	28
8281	81	D150	5.9	5.8	67.0	3.95	6.3	25.87	.56	27.00	7.07	55.31	ND	46	33	21
8282	82	D180	7.2	6.9	98.0	3.00	9.3	25.00	.38	11.00	3.37	32.50	.26	24	39	37
8283	83	D210	7.6	7.5	120.0	2.55	10.9	22.83	.34	6.45	2.26	26.88	.56	14	42	44
8284	84	D240	7.5	7.4	100.0	2.60	9.3	22.17	.36	8.45	2.96	27.19	.73	22	43	35
8285	85	D270	7.3	7.1	92.0	3.15	9.0	25.43	.41	12.00	4.11	33.75	1.24	32	32	36
8286	86	D300	7.3	7.3	97.6	2.35	8.7	20.65	.31	8.05	3.29	25.00	.51	28	34	38
8287	87	D330	7.4	7.2	102.4	2.60	7.7	20.00	.38	9.90	3.54	26.88	.47	34	32	34
8288	88	D360	7.6	7.3	107.2	1.50	10.2	13.04	.19	2.38	.92	9.88	.38	22	43	35
8289	89	D390	7.6	7.4	91.6	1.35	7.5	10.43	.24	2.70	1.16	7.69	.73	23	43	34
8290	90	D420	7.6	7.4	80.0	1.65	6.6	11.74	.30	4.70	1.69	10.81	.73	28	42	30

ANALYTICAL DATA FOR RECONSTRUCTED SOILS SAMPLED IN 1982.

MINE H
MAT RC4
SITE 8

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
8291	91	D15	6.1	5.8	71.2	.75	5.1	5.52	.09	1.90	.46	4.00	ND	ND	ND	ND
8292	92	D30	5.9	5.6	58.0	1.30	8.7	10.00	.19	2.25	.40	11.00	ND	58	6	36
8293	93	D45	6.5	6.4	67.5	2.68	12.4	23.26	.39	5.95	1.13	25.94	ND	42	35	23
8294	94	D60	7.0	7.0	76.0	4.35	13.4	39.78	.69	15.25	2.47	51.25	.13	26	42	32
8295	95	D75	7.6	7.3	73.3	2.75	17.0	25.43	.42	4.00	.47	22.50	.04	30	42	28
8296	96	D90	7.6	7.4	62.9	3.30	13.8	29.78	.58	8.00	1.26	30.63	.09	46	33	21
8297	97	D120	7.4	7.1	70.4	3.38	14.8	30.65	.47	7.50	1.13	31.25	.17	33	38	29
8298	98	D150	7.4	7.2	64.5	2.52	19.6	24.57	.34	2.85	.30	16.88	.30	41	39	20
8299	99	D180	8.0	7.7	68.0	2.20	28.1	21.30	.35	1.15	.00	13.75	1.37	41	41	18
82100	100	D210	8.1	7.7	66.8	2.25	28.6	22.61	.35	1.25	.00	15.00	.38	37	42	21
82101	101	D240	7.8	7.5	73.0	2.00	22.2	19.57	.32	1.55	.00	12.50	1.37	30	49	21
82102	102	D270	7.5	7.2	71.0	2.82	15.4	26.96	.46	5.45	.72	24.69	.60	35	43	22
82103	103	D300	7.8	7.5	70.0	2.50	21.4	25.22	.39	2.65	.13	18.13	.17	31	46	23
82104	104	D330	8.1	7.8	80.0	2.05	26.9	19.78	.33	1.08	.00	12.31	.21	25	54	21
82105	105	D360	8.0	7.7	67.6	2.10	30.6	21.30	.33	.97	.00	14.06	.21	50	31	19
82106	106	D420	7.0	6.7	76.8	2.35	17.4	22.39	.32	3.05	.27	19.69	.06	42	32	26

ANALYTICAL DATA FOR RECONSTRUCTED SOILS SAMPLED IN 1982.

MINE H
MAT RC4
SITE 9

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
82107	107	D15	5.1	4.8	65.3	.40	5.1	1.48	.02	.17	.00	.93	ND	ND	ND	ND
82108	108	D30	5.5	5.3	76.8	.45	2.4	1.83	.01	.90	.27	1.44	ND	13	47	40
82109	109	D45	7.1	6.9	90.4	.95	4.9	5.96	.08	2.38	.61	4.25	.34	ND	ND	ND
82110	110	D60	7.6	7.3	90.0	1.62	21.6	15.65	.20	1.05	.00	8.69	.73	33	41	26
82111	111	D75	7.6	7.3	98.7	1.75	29.4	18.26	.17	.77	.00	11.75	.38	34	44	22
82112	112	D90	7.5	7.3	92.7	2.60	24.0	26.09	.24	2.18	.19	18.75	.94	39	38	23
82113	113	D120	7.4	7.3	86.8	3.10	22.7	31.96	.23	3.65	.32	26.25	.47	41	38	21
82114	114	D150	7.8	7.5	80.0	2.15	22.1	21.52	.21	1.80	.10	13.13	1.28	36	40	24
82115	115	D180	8.3	7.9	84.0	2.05	32.2	20.00	.27	.77	.00	12.00	1.24	19	50	31
82116	116	D210	7.1	7.8	80.0	2.20	13.1	4.43	.06	.23	.00	2.84	1.32	19	46	35
82117	117	D240	8.2	7.8	80.0	1.98	30.3	20.22	.23	.89	.00	13.44	.98	13	54	33
82118	118	D270	8.5	8.0	80.0	2.05	41.7	20.43	.28	.48	.00	11.69	2.94	27	50	23

ANALYTICAL DATA FOR RECONSTRUCTED SOILS SAMPLED IN 1982.

MINE H
MAT RC4
SITE 10

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
82119	119	D15	7.4	7.0	68.0	1.38	10.6	13.26	.13	2.60	.56	1.88	.64	32	36	32
82120	120	D30	7.8	7.6	96.0	2.90	14.3	28.70	.15	6.40	1.67	26.56	1.49	32	37	31
82121	121	D45	7.3	7.0	75.0	3.85	8.4	24.40	.31	13.60	3.40	30.38	1.02	51	25	24
82122	122	D60	6.3	6.1	78.7	3.10	4.1	14.60	.64	21.00	3.86	36.19	ND	54	32	14
82123	123	D75	5.9	5.8	80.0	3.25	3.1	12.40	.52	27.90	4.81	41.38	ND	43	34	23
82124	124	D90	6.1	5.9	80.0	2.40	3.3	10.00	.42	16.20	2.75	26.63	ND	47	35	18
82125	125	D120	6.3	6.2	74.0	3.25	3.4	13.40	.59	27.40	4.65	41.38	ND	50	29	21
82127	127	D150	6.5	6.4	72.5	2.88	3.5	12.60	.56	21.70	3.93	33.88	ND	38	35	27
82128	128	D180	6.4	6.3	63.2	3.41	3.6	14.30	.77	26.70	5.36	40.50	ND	45	34	21
82129	129	D210	7.4	7.2	73.5	2.85	5.8	17.00	.90	14.90	2.52	28.31	.77	27	48	25
82130	130	D240	7.9	7.6	64.5	2.52	6.0	15.90	.97	12.00	1.97	23.75	.60	43	35	22
82131	131	D270	8.1	7.8	62.8	1.85	5.1	10.60	.91	7.60	1.20	15.13	1.83	46	36	18
82132	132	D300	8.1	7.8	60.8	1.60	4.2	8.60	.82	7.30	1.27	13.56	.73	46	35	19
82133	133	D330	7.8	7.6	63.6	2.05	3.9	9.70	.98	10.40	2.03	18.00	1.19	41	41	18
82134	134	D360	7.4	7.1	69.0	2.40	3.4	10.10	.99	14.50	3.18	22.19	.15	44	39	17

ANALYTICAL DATA FOR RECONSTRUCTED SOILS SAMPLED IN 1982

MINE H
MAT RC4
SITE 11

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
82135	135	D15	5.1	7.5	65.0	.50	ND	3.50	.06	.00	.00	1.64	.11	25	44	31
82136	136	D30	5.1	4.7	63.0	.75	18.8	6.10	.08	.21	.00	4.51	ND	24	44	32
82137	137	D45	6.9	6.5	80.0	2.70	11.2	24.00	.61	7.80	1.46	28.06	.13	21	49	30
82138	138	D60	7.2	7.0	79.3	3.00	12.2	27.10	.61	8.50	1.36	32.31	.34	21	50	29
82139	139	D75	7.3	7.1	80.0	2.25	15.4	22.30	.40	3.70	.52	20.94	.17	30	45	25
82140	140	D90	7.7	7.5	74.7	3.32	15.9	35.30	.64	8.40	1.50	39.75	.85	25	46	29
82141.	141	D120	7.9	7.6	73.5	2.50	17.5	25.50	.50	3.80	.47	24.38	1.58	19	52	29
82142	142	D150	8.0	7.9	68.0	3.25	18.5	35.00	.40	6.30	.88	35.63	3.07	37	51	12
82143	143	D180	9.6	9.4	75.5	3.50	25.0	37.50	.36	4.50	.00	38.06	2.63	48	49	3
82144	144	D210	10.2	ND	68.8	3.60	47.2	40.90	.42	1.50	.00	35.94	2.29	43	53	4
82145	145	D240	ND	9.7	67.2	4.42	43.6	53.40	.49	3.00	.00	49.88	2.33	39	57	4
82146	146	D270	9.6	9.3	68.4	5.30	65.3	68.50	.58	2.20	.00	64.75	2.92	45	51	4
82147	147	D300	9.7	9.3	70.0	3.60	25.2	39.00	.25	4.80	.00	41.25	2.96	52	44	4

MINE H
MAT RC4
SITE 12

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
82148	148	D15	7.1	6.8	66.7	1.45	8.8	13.60	.26	3.80	.99	8.88	.34	35	39	26
82149	149	D30	7.6	7.2	75.0	2.10	9.7	19.00	.21	5.80	1.94	22.75	.17	40	30	30
82150	150	D45	7.2	7.0	60.0	1.15	2.0	4.40	.16	6.50	2.80	10.31	.13	51	31	18
82151	151	D60	7.4	7.4	66.7	.88	1.6	3.00	.12	5.10	2.15	6.94	1.19	37	33	30
82152	152	D75	7.3	7.2	60.6	1.00	1.6	3.30	.14	6.40	2.52	8.38	.09	57	29	14
82153	153	D90	7.4	7.3	64.6	1.20	2.5	5.30	.15	6.50	2.54	10.69	.43	59	26	15
82154	154	D120	7.5	7.3	73.2	1.65	8.6	13.50	.12	3.70	1.21	14.63	.43	45	27	28
82155	155	D150	7.8	7.6	88.0	2.20	20.2	25.50	.12	2.70	.50	22.19	.38	39	37	24
82156	156	D180	8.1	8.0	118.8	2.75	40.2	32.40	.14	1.30	.00	26.25	.76	28	47	25
82157	157	D210	8.2	8.0	112.0	2.80	49.6	33.30	.21	.90	.00	26.13	1.19	22	54	24
82158	158	D240	7.6	7.7	112.0	3.95	38.6	48.00	.30	3.10	.00	44.69	.21	28	47	25
82159	159	D270	7.5	7.4	110.0	5.70	34.6	70.10	.32	7.70	.52	67.88	.13	30	46	24

ANALYTICAL DATA FOR RECONSTRUCTED SOILS SAMPLED IN 1982.

MINE H
MAT RC4
SITE 13

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
82160	160	D15	5.8	5.4	69.6	.70	3.1	2.80	.05	1.40	.26	1.80	ND	ND	ND	ND
82161	161	D30	7.0	6.7	80.7	1.10	5.3	7.90	.05	3.40	1.00	4.14	.25	27	40	33
82162	162	D45	7.3	7.0	93.7	2.70	14.8	26.90	.12	5.30	1.27	26.81	.55	31	38	31
82163	163	D60	7.0	6.9	104.0	3.85	22.7	43.90	.32	5.80	1.69	43.00	.55	32	39	29
82164	164	D75	7.9	7.7	132.8	2.70	20.0	27.30	.17	3.08	.65	26.88	3.26	30	37	33
82165	165	D90	7.7	7.5	115.2	3.00	17.9	31.10	.21	4.80	1.21	31.75	.76	24	43	33
82166	166	D120	7.7	7.4	102.8	3.10	15.8	31.30	.21	6.00	1.88	32.81	.97	26	43	31
82167	167	D150	7.8	7.7	109.6	3.10	18.8	30.60	.17	4.20	1.11	31.06	1.36	24	43	33
82168	168	D180	7.6	7.4	104.0	3.38	19.1	35.00	.21	5.30	1.41	34.00	1.14	37	36	27
82169	169	D210	7.5	7.1	80.0	2.85	16.2	28.10	.11	4.30	1.72	26.19	.38	21	52	27
82170	170	D240	7.7	7.4	88.0	3.15	16.4	30.20	.18	5.00	1.75	30.63	.59	26	44	30
82171	171	D270	7.8	7.6	100.4	4.15	18.1	42.80	.49	8.80	2.35	48.75	1.93	22	49	29

MINE H
MAT RC4
SITE 14

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
82172	172	D15	7.6	7.2	70.4	1.10	7.1	8.40	.18	2.20	.63	2.91	.84	27	39	34
82173	173	D30	7.2	6.9	84.7	4.72	13.5	44.90	.41	16.60	5.59	57.00	1.64	32	36	32
82174	174	D45	7.6	7.5	102.0	4.25	23.6	46.60	.50	5.70	2.08	47.44	1.81	18	59	23
82175	175	D60	6.3	6.1	105.0	2.35	36.9	26.60	.26	.80	.24	25.50	ND	18	62	20
82176	176	D75	7.1	6.7	125.0	2.65	33.4	29.80	.30	1.20	.39	27.88	.17	22	57	21
82177	177	D90	6.9	6.7	100.0	4.92	26.5	56.60	.62	6.70	2.44	61.31	.13	24	52	24
82178	178	D150	7.7	7.5	138.0	2.85	34.8	30.40	.25	1.30	.23	27.31	.17	40	38	22
82179	179	D180	7.6	7.4	120.0	3.70	27.3	41.90	.31	3.70	1.01	39.31	2.86	34	44	22
82180	180	D210	6.5	6.3	75.0	5.50	22.4	60.10	.64	10.90	3.53	69.88	ND	22	55	23
82181	181	D240	5.6	5.5	85.6	5.30	25.9	65.20	.54	9.80	2.87	72.69	ND	32	43	25
82182	182	D270	6.1	5.9	76.8	4.55	27.0	53.60	.50	5.90	1.96	56.50	ND	25	55	20
82183	183	D300	7.2	7.0	72.0	4.80	26.3	48.90	.43	5.30	1.60	44.56	.93	24	54	22

ANALYTICAL DATA FOR RECONSTRUCTED SOILS SAMPLED IN 1982.

MINE H
MAT RC4
SITE 15

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
82184	184	D15	5.4	5.0	43.6	.42	3.6	1.40	.11	.30	.00	1.29	ND	73	15	12
82185	185	D30	4.3	4.0	55.6	.72	5.0	4.20	.20	.90	.49	4.58	ND	42	26	32

MINE H
MAT RC4
SITE 16

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
82186	186	D15	5.5	4.9	69.6	.55	5.7	4.40	.01	1.00	.21	2.05	ND	37	44	19
82187	187	D30	5.6	5.4	50.4	2.45	8.2	20.80	.27	10.00	2.99	3.29	ND	38	40	22

MINE H
MAT RC4
SITE 20

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
82194	194	D15	5.9	5.5	54.8	.35	.5	.50	.04	1.90	.28	.63	ND	52	35	13
82195	195	D30	6.7	6.4	63.2	.95	3.2	5.60	.10	4.40	1.78	2.71	ND	37	37	26

MINE H
MAT RC4
SITE 21

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
82196	196	D15	6.7	6.3	56.8	.74	2.0	2.90	.16	3.30	1.06	.76	ND	48	34	18
82197	197	D30	7.4	7.0	68.0	.95	8.5	9.70	.07	2.10	.50	3.79	.55	37	31	32

ANALYTICAL DATA FOR RECONSTRUCTED SOILS SAMPLED IN 1982

MINE H
MAT RC4
SITE 22

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
82198	198	D15	5.2	4.6	67.2	.40	31.0	3.10	.05	.02	.00	.96	ND	39	40	21
82199	199	D30	5.3	4.6	64.4	.32	ND	2.40	.07	.00	.00	.88	ND	35	49	26
82200	200	D60	4.6	4.3	66.4	.37	5.4	2.10	.06	.30	.00	2.26	ND	34	34	32

MINE H
MAT RC4
SITE 23

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
82201	201	D15	6.6	6.3	81.6	.82	.6	1.20	.46	6.80	2.26	.88	ND	50	34	16
82202	202	D30	4.5	4.1	66.0	.35	16.3	2.00	.05	.03	.00	1.89	ND	27	34	39

MINE H
MAT RC4
SITE 25

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
82204	204	D15	6.2	6.1	62.4	1.38	2.4	5.30	.18	7.20	2.77	1.71	ND	43	31	26

MINE H
MAT RC4
SITE 26

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
82205	205	D15	5.8	5.6	61.2	.98	3.2	5.50	.11	4.40	1.70	2.59	ND	39	35	26
82206	206	D45	7.3	6.9	63.6	.95	2.9	5.40	.14	5.40	1.55	7.71	.51	ND	ND	ND

ANALYTICAL DATA FOR RECONSTRUCTED SOILS SAMPLED IN 1982.

MINE H
MAT RC5
SITE 17

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
82188	188	D15	5.1	4.7	58.0	.43	5.4	2.10	.05	.30	.00	1.71	ND	29	44	27
82189	189	D30	6.6	6.4	58.4	1.60	6.0	12.10	.23	6.10	2.07	16.38	ND	36	39	25

MINE H
MAT RC5
SITE 18

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
82190	190	D15	5.0	4.7	58.4	.35	ND	1.70	.03	.00	.00	1.24	ND	16	43	41
82191	191	D30	7.8	7.6	88.4	.85	ND	9.00	.14	.00	.00	4.77	.51	39	38	23

MINE H
MAT RC5
SITE 19

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
82192	192	D15	5.4	5.0	60.8	.25	ND	1.20	.01	.00	.00	.61	ND	22	46	32
82193	193	D30	4.7	4.4	87.6	.52	14.5	3.40	.09	.11	.00	3.91	ND	7	46	47

MINE H
MAT RC5
SITE 24

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
82203	203	D15	5.9	5.3	56.0	.38	.7	.70	.13	1.60	.51	.65	ND	38	47	15

MINE H
MAT RC9
SITE 27

LSN	FSN	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
82657	207	D45	5.2	5.0	100.0	1.60	6.5	12.40	.07	5.50	1.89	15.94	.25	57	33	10

5.2 Analytical Data For Reconstructed Soils Sampled in 1983.

ANALYTICAL DATA FOR RECONSTRUCTED SOILS SAMPLED IN 1983.

MINE D
SITE 1

DIG	MAT	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
1	RC3	D15	7.4	7.2	45.0	.69	1.2	2.04	.24	4.25	2.00	2.50	.34	39	34	27
1	RC3	D30	7.4	7.0	52.5	1.27	1.4	3.43	.24	8.25	4.42	9.40	.89	42	32	26
1	RC3	D45	7.6	7.5	48.5	2.12	.9	3.30	.40	20.25	8.50	25.60	2.35	47	26	25
1	RC3	D60	7.7	7.6	47.5	1.24	.6	1.52	.34	10.00	4.33	12.20	2.30	47	28	25
1	RC3	D75	7.8	7.6	43.5	1.02	.6	1.46	.31	7.50	3.63	9.30	2.76	51	24	25
1	RC3	D90	7.9	7.6	40.5	1.06	.7	1.67	.35	7.25	4.67	9.70	2.47	52	27	21
1	RC3	D120	7.9	7.5	43.0	.80	.7	1.37	.32	4.65	3.46	6.30	1.87	51	26	23
1	RC3	D150	7.8	7.5	45.0	1.54	.9	2.82	.42	12.75	5.92	17.20	2.59	51	24	25
2	RC3	D15	7.5	7.2	45.5	.95	1.3	2.82	.27	5.95	2.88	.40	.17	37	38	25
2	RC3	D30	7.3	7.1	49.0	2.72	1.3	5.65	.37	25.00	12.50	34.70	.59	41	33	26
2	RC3	D45	7.5	7.4	46.0	2.85	.9	4.22	.41	29.75	13.00	39.10	2.76	51	24	25
2	RC3	D60	6.9	6.9	50.0	1.69	.7	2.43	.19	14.75	6.67	15.30	1.10	45	33	22
2	RC3	D75	7.5	7.4	35.0	2.87	.6	2.70	.42	31.50	14.00	40.30	2.20	50	24	26
2	RC3	D90	7.5	7.4	45.5	2.73	.7	2.78	.53	22.75	13.17	36.60	3.22	51	24	25
2	RC3	D120	7.6	7.5	46.5	2.74	.6	2.78	.44	27.50	13.25	37.50	2.59	49	25	26
2	RC3	D150	7.5	7.4	46.0	2.76	.7	3.30	.51	27.00	14.25	37.80	2.54	50	24	26
3	RC3	D15	7.5	7.3	46.5	.92	1.3	2.52	.26	5.40	2.58	3.40	.19	38	37	25
3	RC3	D30	7.1	7.0	46.5	2.36	1.9	7.30	.29	17.50	10.75	25.60	.34	36	39	25
3	RC3	D45	7.6	7.4	46.0	3.21	1.5	7.09	.49	28.25	16.67	44.40	2.24	46	29	25
3	RC3	D60	7.6	7.4	46.0	3.02	1.1	5.35	.51	29.25	14.92	41.60	2.70	48	26	26
3	RC3	D75	7.6	7.5	44.5	2.92	.7	3.13	.47	30.00	13.92	39.70	2.19	51	25	24
3	RC3	D90	7.5	7.3	45.5	2.73	.5	2.07	.51	30.50	12.00	37.50	2.19	54	21	25
3	RC3	D120	7.7	7.5	44.0	2.28	.6	2.39	.37	25.50	11.92	34.40	2.53	50	24	26
3	RC3	D150	7.8	7.6	43.0	1.86	.4	1.17	.25	13.25	3.67	16.90	2.87	51	23	26

ANALYTICAL DATA FOR RECONSTRUCTED SOILS SAMPLED IN 1983.

MINE D
SITE 2

DIG	MAT	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
1	RC3	D15	6.3	6.1	48.5	.68	.7	1.24	.38	4.15	1.92	3.10	.11	40	35	25
1	RC3	D30	7.4	7.2	45.0	2.94	.8	3.83	.55	29.25	15.00	41.30	2.19	48	28	24
1	RC3	D45	7.6	7.4	45.5	3.27	1.5	7.13	.58	29.00	18.75	47.20	2.45	49	25	26
1	RC3	D60	7.5	7.4	43.5	3.34	1.6	7.61	.53	29.00	18.75	47.50	1.86	49	27	24
1	RC3	D75	7.7	7.5	45.5	3.48	2.0	10.00	.51	29.00	20.00	51.90	.00	48	29	23
1	RC3	D90	7.7	7.5	41.0	3.66	2.2	11.09	.51	28.25	21.67	53.40	2.33	49	29	22
1	RC3	D120	7.5	7.5	42.5	3.62	2.3	11.30	.49	28.75	20.00	51.30	1.78	46	28	26
1	RC3	D150	7.7	7.6	39.5	3.73	2.7	13.48	.53	28.25	20.42	53.80	2.46	50	28	22
2	RC3	D15	6.9	6.6	47.5	.68	.7	1.28	.35	4.35	2.04	2.50	.15	40	35	25
2	RC3	D30	7.2	7.1	46.0	2.25	.6	2.26	.51	23.25	10.00	27.80	1.14	45	29	26
2	RC3	D45	7.5	7.3	37.0	2.98	.6	2.96	.60	31.50	14.25	41.60	2.75	55	24	21
2	RC3	D60	7.6	7.4	34.0	3.29	1.0	5.00	.68	31.00	18.75	46.90	3.59	57	25	18
2	RC3	D75	7.6	7.3	26.0	3.41	1.4	6.78	.59	32.00	17.50	48.40	1.90	86	7	7
2	RC3	D90	7.7	7.5	29.0	3.42	2.0	9.78	.56	28.75	18.75	50.00	2.79	61	21	18
2	RC3	D120	7.6	7.6	41.5	3.72	2.3	11.74	.58	27.75	22.92	54.40	1.77	47	29	24
2	RC3	D150	7.2	7.3	37.0	3.78	2.5	12.83	.56	29.00	22.92	54.10	2.75	54	25	21
3	RC3	D15	6.9	6.6	45.0	.66	.5	.96	.37	4.55	2.13	2.50	.30	40	35	25
3	RC3	D30	7.3	7.1	46.0	2.44	1.0	4.04	.54	23.25	11.25	30.00	1.18	41	32	27
3	RC3	D45	7.4	7.3	40.5	3.32	1.5	7.17	.67	29.75	17.92	45.90	2.28	45	31	24
3	RC3	D60	7.9	7.7	45.5	1.57	2.2	5.78	.44	8.00	6.00	15.00	2.96	43	30	27
3	RC3	D75	7.6	7.5	43.0	3.46	1.8	8.90	.73	29.50	19.17	48.40	2.54	43	31	26
3	RC3	D90	7.6	7.4	37.5	3.64	1.8	8.90	.72	28.75	22.50	50.90	2.28	53	26	21
3	RC3	D120	7.7	7.5	40.5	3.96	2.1	10.87	.67	28.00	27.50	57.50	2.03	48	29	23
3	RC3	D150	7.6	7.4	28.8	3.90	2.5	12.83	.63	29.00	23.75	56.30	2.37	72	12	16

ANALYTICAL DATA FOR RECONSTRUCTED SOILS SAMPLED IN 1983

MINE D
SITE 3

DIG	MAT	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
1	RC3	D15	7.1	6.8	43.0	.65	.5	.83	.26	4.25	2.21	2.20	.19	35	37	28
1	RC3	D30	7.7	7.5	43.5	.90	.5	1.00	.33	6.35	3.17	5.70	2.20	46	29	25
1	RC3	D45	7.9	7.6	42.0	.91	.5	1.13	.38	6.50	3.29	6.90	2.87	45	30	25
1	RC3	D60	7.8	7.6	42.0	.71	.4	.82	.32	4.80	2.42	4.40	2.62	47	27	26
1	RC3	D75	7.8	7.5	42.5	.74	.4	.77	.38	5.05	2.63	4.20	2.67	49	28	23
1	RC3	D90	7.8	7.5	41.0	.56	.4	.63	.33	3.75	1.83	2.50	2.24	49	27	24
1	RC3	D120	7.7	7.4	35.5	.52	.4	.59	.34	3.55	1.71	1.80	1.64	50	27	23
1	RC3	D150	7.9	7.5	33.5	.40	.6	.78	.25	2.65	1.33	1.70	3.01	53	24	23
2	RC3	D15	7.2	6.9	45.0	.58	.4	.74	.25	4.05	2.04	1.60	.26	31	41	28
2	RC3	D30	7.6	7.3	42.5	1.47	.5	1.48	.41	12.75	5.92	14.40	2.06	45	29	26
2	RC3	D45	7.7	7.6	40.5	2.06	.7	2.57	.56	19.00	9.67	25.30	2.57	49	28	23
2	RC3	D60	7.8	7.5	40.0	2.50	.6	2.48	.65	24.75	12.67	33.10	2.57	49	28	23
2	RC3	D75	7.4	7.5	40.0	2.82	.5	2.22	.67	28.00	14.67	37.50	2.40	51	27	22
2	RC3	D90	7.7	7.6	40.5	2.15	.5	1.78	.58	19.75	11.42	26.60	2.23	49	27	24
2	RC3	D120	7.6	7.6	43.5	2.85	.4	1.83	.65	27.50	17.92	40.00	2.79	49	27	24
2	RC3	D150	7.9	7.6	40.5	.70	.5	.86	.25	4.85	2.46	4.90	1.50	50	26	24
3	RC3	D15	6.9	6.5	45.5	.67	.5	.85	.31	4.55	2.42	2.10	.15	35	39	26
3	RC3	D30	7.5	7.6	40.5	1.59	.5	1.52	.51	14.25	6.08	17.20	2.22	54	23	23
3	RC3	D45	7.6	7.6	37.0	2.15	.8	3.13	.60	20.00	10.50	27.50	2.65	53	25	22
3	RC3	D60	7.7	7.6	44.0	1.68	.8	2.61	.43	13.75	7.42	19.10	2.31	51	26	23
3	RC3	D75	7.6	7.6	41.5	2.09	.7	2.74	.51	18.25	9.75	25.30	2.31	51	26	23
3	RC3	D90	7.6	7.5	41.0	1.58	.6	2.04	.54	13.00	7.33	17.20	2.05	54	25	21
3	RC3	D120	7.7	7.5	41.5	2.23	.4	1.65	.56	21.00	11.42	28.10	2.91	51	27	22
3	RC3	D150	7.6	7.6	43.5	2.74	.4	1.98	.68	28.75	15.75	39.70	2.31	48	28	24

ANALYTICAL DATA FOR RECONSTRUCTED SOILS SAMPLED IN 1983.

MINE D
SITE 4

DIG	MAT	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
1	RC3	D15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1	RC3	D30	7.7	7.5	43.0	.60	.3	.48	.41	4.40	1.75	4.40	1.97	49	27	24
1	RC3	D45	7.7	7.4	41.0	.49	.2	.38	.39	3.65	1.41	2.60	1.71	47	27	26
1	RC3	D60	7.6	7.4	42.5	.42	.3	.39	.40	3.05	1.17	1.40	1.03	47	27	26
1	RC3	D75	7.6	7.4	37.0	.37	.3	.34	.34	2.55	1.03	1.10	1.71	50	27	23
1	RC3	D90	7.7	7.4	37.5	.39	.3	.40	.33	2.55	1.08	1.10	1.40	51	25	24
1	RC3	D120	7.5	7.4	34.5	.46	.4	.55	.39	3.15	1.33	2.30	1.21	51	22	22
1	RC3	D150	6.5	5.7	41.0	.26	.5	.47	.38	1.38	.68	.90	.13	24	38	38
2	RC3	D15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2	RC3	D30	7.1	7.2	43.0	1.16	.4	1.00	.60	10.50	3.75	11.70	1.21	48	28	24
2	RC3	D45	7.4	7.3	40.5	.75	.4	.71	.53	5.90	2.17	5.70	1.72	52	26	22
2	RC3	D60	7.4	7.4	38.5	.45	.3	.48	.35	3.20	1.16	2.30	2.58	49	28	23
2	RC3	D75	7.6	7.5	41.0	.35	.3	.39	.32	2.35	.94	1.20	2.15	49	28	23
2	RC3	D90	7.5	7.4	40.0	.34	.3	.39	.32	2.35	.92	1.10	2.41	50	26	24
2	RC3	D120	7.6	7.4	38.5	.31	.3	.31	.28	2.10	.84	1.00	2.02	49	26	25
2	RC3	D150	7.6	7.4	38.5	.36	.3	.38	.36	2.48	1.04	1.30	1.59	52	27	21
3	RC3	D15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3	RC3	D30	7.6	7.5	39.5	2.23	.4	1.78	.76	23.75	9.25	30.90	2.15	56	24	20
3	RC3	D45	7.5	7.4	40.0	.90	.3	.73	.55	7.10	2.88	8.10	2.24	48	28	24
3	RC3	D60	7.4	7.5	39.5	.68	.3	.59	.46	4.95	2.04	5.30	2.05	50	27	23
3	RC3	D75	7.4	7.3	28.5	.98	.3	.71	.64	8.75	3.46	9.70	2.90	63	20	17
3	RC3	D90	7.2	7.3	42.5	.72	.2	.36	.49	5.35	2.29	5.60	2.30	53	25	22
3	RC3	D120	7.4	7.5	37.5	.36	.4	.56	.43	2.48	1.06	1.80	1.79	51	26	23
3	RC3	D150	7.6	7.5	38.0	.49	.3	.38	.38	3.35	1.33	2.80	2.21	51	26	23

ANALYTICAL DATA FOR RECONSTRUCTED SOILS SAMPLED IN 1983

MINE D
SITE 5

DIG	MAT	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
1	RC3	D15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1	RC3	D30	7.4	7.3	42.0	3.42	2.1	10.22	.71	28.25	18.75	49.10	1.87	51	27	22
1	RC3	D45	7.5	7.4	41.0	4.15	3.4	16.96	.69	26.50	22.92	56.90	2.13	48	29	23
1	RC3	D60	7.6	7.5	40.0	4.54	4.1	21.09	.72	27.75	25.00	58.80	1.87	52	26	22
1	RC3	D75	7.5	7.5	39.0	4.64	4.1	21.30	.72	28.25	25.83	57.80	1.96	52	28	20
1	RC3	D90	7.6	7.5	37.5	4.40	3.7	18.70	.71	27.75	24.58	57.80	2.47	48	30	22
1	RC3	D120	7.5	7.5	41.0	3.95	3.4	16.74	.68	26.25	22.92	53.40	2.31	48	29	23
1	RC3	D150	7.5	7.6	39.5	4.27	3.5	17.61	.72	27.50	23.75	55.60	2.06	49	29	22
2	RC3	D15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2	RC3	D30	7.5	7.4	39.0	3.58	2.2	10.87	.71	28.50	19.58	51.60	.00	49	27	24
2	RC3	D45	7.5	7.4	40.0	4.06	3.3	16.96	.71	27.50	24.17	60.00	2.83	52	26	22
2	RC3	D60	7.6	7.3	39.0	4.66	4.0	20.87	.72	29.25	26.67	61.60	3.00	51	27	22
2	RC3	D75	7.4	7.5	37.5	4.59	3.7	19.13	.71	29.75	25.00	56.30	3.21	53	27	20
2	RC3	D90	7.5	7.4	39.0	4.31	3.2	16.52	.69	28.25	23.75	55.00	2.79	49	28	23
2	RC3	D120	7.5	7.5	41.5	4.23	3.1	15.65	.71	28.50	22.92	53.40	2.23	48	27	25
2	RC3	D150	7.5	7.5	39.5	4.20	3.2	16.30	.76	29.25	23.75	56.60	2.47	47	30	23
3	RC3	D15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3	RC3	D30	7.2	7.3	40.0	3.58	2.2	10.87	.72	29.25	20.42	52.50	2.90	52	27	21
3	RC3	D45	7.5	7.5	40.0	4.13	3.2	15.87	.74	28.25	22.50	55.90	2.22	52	27	21
3	RC3	D60	7.5	7.4	41.0	4.55	3.4	17.61	.74	30.00	24.58	54.10	2.30	51	26	23
3	RC3	D75	7.5	7.5	37.5	4.88	3.9	20.87	.77	29.75	26.67	56.90	4.69	52	28	20
3	RC3	D90	7.5	7.5	39.0	4.43	3.5	18.04	.76	29.25	24.17	55.90	2.13	49	29	22
3	RC3	D120	7.6	7.4	41.0	4.53	3.9	19.78	.71	27.75	25.00	58.10	2.04	47	30	23
3	RC3	D150	7.5	7.5	43.5	4.31	3.5	17.83	.71	27.75	23.33	55.90	2.38	52	25	23

ANALYTICAL DATA FOR RECONSTRUCTED SOILS SAMPLED IN 1983

MINE D
SITE 6

DIG	MAT	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
1	RC3	D15	6.9	6.8	45.0	1.07	1.3	2.87	.45	6.80	3.50	9.30	.30	41	36	23
1	RC3	D30	7.5	7.0	43.5	3.52	2.8	13.04	.73	25.75	18.33	50.90	2.64	47	31	22
1	RC3	D45	7.5	7.4	42.5	4.33	4.5	22.17	.78	26.00	23.33	63.80	2.08	51	27	22
1	RC3	D60	7.5	7.3	42.0	4.55	5.3	25.65	.76	24.75	22.08	65.00	2.13	49	28	23
1	RC3	D75	7.6	7.5	42.5	4.52	5.4	26.52	.71	25.00	23.33	67.50	2.05	48	23	29
1	RC3	D90	7.6	7.4	43.5	4.48	5.3	25.43	.71	24.75	21.67	63.80	2.31	48	29	23
1	RC3	D120	7.5	7.4	42.0	4.44	5.1	24.35	.71	25.25	21.25	62.50	2.47	47	31	22
1	RC3	D150	7.6	7.5	43.0	4.57	5.1	25.43	.74	26.00	23.75	67.50	2.47	49	28	23
2	RC3	D15	6.5	5.8	44.0	.57	.9	1.41	.33	3.85	1.62	3.10	.34	43	36	21
2	RC3	D30	6.5	6.5	45.0	2.86	1.2	5.52	.63	27.75	12.50	38.10	.94	47	32	21
2	RC3	D45	7.4	7.4	43.5	4.03	3.8	18.04	.74	25.25	20.83	58.10	2.81	49	28	23
2	RC3	D60	7.5	7.5	44.5	4.33	5.0	23.91	.74	24.25	21.67	62.50	2.20	47	29	24
2	RC3	D75	7.6	7.6	44.5	4.84	5.7	28.48	.78	25.25	24.58	70.00	2.59	47	30	23
2	RC3	D90	7.3	7.5	43.5	4.86	6.0	29.78	.73	25.25	24.58	71.30	2.71	48	29	23
2	RC3	D120	7.5	7.5	42.0	4.55	5.3	26.52	.72	25.75	23.75	67.50	2.24	48	29	23
2	RC3	D150	7.4	7.4	42.5	4.02	4.9	23.26	.71	23.75	21.67	62.20	2.16	49	28	23
3	RC3	D15	6.6	6.1	50.0	.61	1.1	1.74	.42	3.40	1.67	4.20	.15	40	37	23
3	RC3	D30	7.1	7.0	40.5	3.51	2.4	11.74	.92	29.25	17.50	51.30	1.87	53	28	19
3	RC3	D45	7.5	7.5	39.0	4.26	4.3	21.09	.77	26.25	22.50	63.80	1.99	52	26	22
3	RC3	D60	7.5	7.4	41.0	4.56	4.9	24.57	.76	26.25	23.33	66.30	2.45	53	26	21
3	RC3	D75	7.5	7.5	40.5	4.46	5.0	24.57	.77	26.25	22.92	66.30	2.45	53	26	21
3	RC3	D90	7.5	7.5	41.5	4.42	4.7	23.04	.77	25.75	22.08	63.80	2.88	51	26	23
3	RC3	D120	6.8	6.7	44.0	4.60	5.0	25.00	.73	28.00	22.92	62.50	1.82	49	30	21
3	RC3	D150	7.4	7.3	43.0	4.31	4.8	23.26	.72	26.75	21.25	63.80	2.24	51	27	22

ANALYTICAL DATA FOR RECONSTRUCTED SOILS SAMPLED IN 1983.

MINE D
SITE 7

DIG	MAT	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
1	RC3	D15	5.8	5.5	50.0	1.44	.5	1.33	.92	9.75	4.67	3.60	.04	46	36	23
1	RC3	D30	6.8	6.9	47.0	3.23	.8	3.83	.92	32.25	18.33	45.30	.90	47	30	23
1	RC3	D45	7.1	7.1	46.0	2.74	.4	1.93	.91	29.00	13.08	39.70	.72	43	32	25
1	RC3	D60	7.1	7.3	42.5	2.78	.3	1.61	.77	29.75	14.58	41.90	1.79	45	30	25
1	RC3	D75	7.3	7.3	36.0	1.41	.4	1.13	.60	12.50	5.33	14.40	1.17	37	38	25
1	RC3	D90	7.0	7.1	42.0	2.19	.4	1.39	.77	22.00	9.67	28.10	.98	44	30	26
1	RC3	D120	7.2	7.3	41.5	2.11	.4	1.43	.81	20.00	11.17	28.40	2.12	44	30	26
1	RC3	D150	7.4	7.4	43.0	2.56	.4	1.80	.71	25.75	12.25	36.90	2.21	40	30	30
2	RC3	D15	5.7	5.3	46.5	1.71	.4	1.04	.77	10.75	5.75	2.10	.11	43	32	25
2	RC3	D30	6.7	6.9	48.5	3.19	.6	3.00	.81	32.75	17.08	42.80	1.02	47	28	25
2	RC3	D45	7.1	7.2	44.5	2.51	.4	1.85	.79	26.00	12.08	35.60	2.12	43	32	25
2	RC3	D60	7.3	7.4	42.5	1.16	.3	.81	.59	9.35	4.25	11.40	2.46	47	29	24
2	RC3	D75	6.1	6.2	52.0	2.13	.6	2.30	.92	19.75	11.50	26.30	.64	55	19	26
2	RC3	D90	6.8	7.0	45.0	2.38	.4	1.65	.85	23.25	12.33	31.30	1.87	51	24	25
2	RC3	D120	7.3	7.4	43.0	1.67	.3	1.13	.68	14.25	7.42	19.70	2.97	44	31	25
2	RC3	D150	7.1	7.1	41.5	3.30	.7	3.30	.83	30.25	21.25	50.90	1.53	45	30	25
3	RC3	D15	5.9	5.8	46.5	1.45	.3	.86	.68	9.15	4.83	3.20	.00	40	36	24
3	RC3	D30	6.9	7.1	44.0	2.94	.4	1.85	.86	30.25	15.75	42.20	1.61	45	30	25
3	RC3	D45	7.3	7.4	44.5	1.76	.3	.85	.68	16.50	7.42	21.60	2.40	44	31	25
3	RC3	D60	7.0	7.1	44.0	1.21	.3	.91	.62	10.00	4.50	11.40	1.15	44	31	25
3	RC3	D75	6.7	6.8	49.0	1.83	.5	1.63	.90	16.25	9.58	18.80	1.06	53	22	25
3	RC3	D90	7.2	7.1	45.0	.94	.3	.75	.54	6.50	3.42	7.70	1.27	44	31	25
3	RC3	D120	7.2	7.3	42.0	3.55	1.4	7.35	.73	27.25	26.67	57.50	1.61	45	31	24
3	RC3	D150	7.2	7.2	41.5	3.35	1.3	6.35	.83	28.50	21.25	58.80	1.53	45	31	24

ANALYTICAL DATA FOR RECONSTRUCTED SOILS SAMPLED IN 1983

MINE D
SITE 8

DIG	MAT	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
1	RC3	D15	5.8	5.3	45.0	.94	.4	.83	.56	5.80	3.04	1.90	.00	43	34	23
1	RC3	D30	6.4	6.7	46.0	3.01	.5	2.11	.95	30.00	14.08	29.70	.23	41	33	26
1	RC3	D45	7.3	7.3	44.0	1.82	.5	1.87	.79	17.50	7.42	22.80	1.27	40	32	28
1	RC3	D60	7.4	7.4	44.0	.92	.4	.84	.56	7.20	2.75	9.10	1.61	43	31	26
1	RC3	D75	7.2	7.1	45.0	.93	.3	.75	.58	7.60	3.04	7.70	.51	41	31	28
1	RC3	D90	7.2	7.2	45.5	1.38	.5	1.33	.64	12.50	5.08	16.30	.98	42	32	26
1	RC3	D120	6.3	6.6	46.5	3.18	1.2	5.61	1.17	29.75	17.92	45.00	.42	45	29	26
1	RC3	D150	4.8	4.7	52.5	3.94	2.7	13.91	.94	29.00	26.25	68.80	.30	63	14	23
2	RC3	D15	5.6	5.0	44.5	.51	.4	.58	.45	2.85	1.44	1.00	.06	42	35	23
2	RC3	D30	6.4	6.3	45.0	3.22	1.0	3.04	.86	3.35	16.42	45.00	.51	31	38	31
2	RC3	D45	6.9	7.0	46.5	2.18	.6	2.26	.96	20.75	9.25	31.90	.51	42	30	28
2	RC3	D60	7.0	7.0	46.0	1.52	.4	1.37	.82	13.50	6.00	18.80	.72	43	30	27
2	RC3	D75	7.0	7.0	46.0	1.90	.5	1.65	.87	18.25	7.83	25.60	1.10	43	31	26
2	RC3	D90	7.0	7.0	46.0	1.82	.6	2.00	.94	17.50	7.58	23.80	1.02	47	26	27
2	RC3	D120	7.0	7.0	45.0	1.64	.5	1.50	.88	15.00	6.50	19.40	.80	43	30	27
2	RC3	D150	7.1	7.0	46.0	1.99	.4	1.61	.91	19.00	8.25	26.30	.97	44	28	28
3	RC3	D15	5.7	5.4	44.0	1.36	.5	1.22	.78	8.05	4.13	2.00	.11	42	35	23
3	RC3	D30	6.6	6.6	45.5	2.81	.6	2.74	1.01	26.50	13.83	35.90	.38	46	28	26
3	RC3	D45	6.9	7.2	46.0	1.89	.6	2.07	.97	17.50	8.08	26.90	.51	40	33	27
3	RC3	D60	7.0	7.1	46.5	1.61	.5	1.50	.91	14.75	6.67	21.60	.55	39	33	28
3	RC3	D75	7.0	7.1	43.0	1.80	.5	1.65	.97	16.75	7.83	24.70	.68	39	33	28
3	RC3	D90	7.2	7.3	44.0	1.48	.4	1.35	.86	13.75	5.83	19.10	.76	41	33	26
3	RC3	D120	7.2	7.2	45.5	1.42	.4	1.22	.85	12.50	5.25	16.60	.63	40	34	26
3	RC3	D150	5.3	5.5	54.0	1.21	1.1	2.78	.88	8.15	5.50	12.30	.38	58	15	27

ANALYTICAL DATA FOR RECONSTRUCTED SOILS SAMPLED IN 1983

MINE D
SITE 9

DIG	MAT	SDTH	PHH	PHC	PSAT	FC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
1	RC3	D15	5.9	5.7	46.0	.79	.6	1.07	.43	5.00	2.58	4.60	.15	35	40	25
1	RC3	D30	7.0	7.1	42.0	3.29	1.5	7.04	.64	32.50	14.17	53.40	1.10	40	35	25
1	RC3	D45	7.2	7.4	43.5	3.16	1.6	7.57	.60	31.00	12.75	55.00	1.57	41	39	20
1	RC3	D60	7.3	7.4	44.5	2.82	1.9	8.30	.56	25.75	10.92	47.50	1.23	40	35	25
1	RC3	D75	7.5	7.5	42.5	2.60	2.7	10.43	.43	19.00	10.33	36.90	1.80	44	31	25
1	RC3	D90	7.6	7.5	43.5	3.04	2.1	9.13	.51	26.00	12.17	44.70	1.85	45	31	24
1	RC3	D120	7.4	7.5	42.5	2.81	1.1	4.83	.53	28.00	10.92	42.20	1.93	43	41	16
1	RC3	D150	7.4	7.6	45.0	2.97	1.6	6.83	.55	26.75	11.42	42.80	1.72	42	33	25
2	RC3	D15	6.2	5.9	48.5	1.29	.6	1.54	.59	9.10	4.75	9.20	.19	38	39	23
2	RC3	D30	6.9	7.2	43.5	2.94	1.1	4.96	.64	29.00	12.17	41.90	1.07	38	37	25
2	RC3	D45	7.3	7.4	43.5	2.94	1.2	5.35	.63	28.75	13.08	45.30	1.50	40	35	25
2	RC3	D60	7.4	7.4	44.5	2.82	1.2	5.43	.64	27.50	11.42	42.50	1.54	43	34	23
2	RC3	D75	7.4	7.4	48.5	2.71	1.2	5.22	.63	26.25	10.75	40.60	1.41	36	38	26
2	RC3	D90	7.4	7.5	45.0	2.92	1.3	5.96	.62	28.00	12.00	44.40	1.41	42	33	25
2	RC3	D120	7.4	7.5	44.0	3.54	2.9	13.04	.60	27.50	14.33	52.50	1.83	42	33	25
2	RC3	D150	7.5	7.5	42.0	3.24	2.7	11.74	.44	24.75	12.83	47.50	1.58	41	33	26
3	RC3	D15	6.1	5.9	48.5	.82	.7	1.33	.43	5.20	2.71	5.10	.04	38	38	24
3	RC3	D30	6.8	6.9	45.0	3.08	1.4	6.39	.67	29.75	13.25	44.40	1.36	40	34	26
3	RC3	D45	7.3	7.3	44.0	2.89	1.5	6.70	.55	28.00	11.33	44.40	1.41	40	34	26
3	RC3	D60	7.3	7.3	43.5	2.74	1.3	5.61	.78	26.25	10.42	40.30	1.11	38	38	24
3	RC3	D75	7.5	7.5	45.0	3.02	1.2	5.70	.69	30.00	12.17	45.60	1.45	41	33	26
3	RC3	D90	7.5	7.5	44.5	3.04	1.6	6.96	.71	28.50	11.75	44.70	1.32	41	33	26
3	RC3	D120	7.5	7.5	43.0	3.19	1.9	8.70	.59	28.75	12.50	48.10	1.45	41	32	27
3	RC3	D150	7.5	7.4	43.5	3.13	1.9	8.35	.54	28.50	12.17	47.20	1.58	42	32	26

ANALYTICAL DATA FOR RECONSTRUCTED SOILS SAMPLED IN 1983

MINE D
SITE 10

DIG	MAT	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
1	RC3	D15	6.5	6.3	46.0	1.31	.5	1.28	.59	10.25	5.00	6.20	.30	45	33	22
1	RC3	D30	6.4	6.4	46.0	2.99	.9	4.26	1.01	27.25	14.67	38.80	.60	42	33	25
1	RC3	D45	7.2	7.3	43.5	3.68	3.3	15.22	.53	28.25	15.42	54.40	1.75	45	31	24
1	RC3	D60	7.5	7.5	42.0	4.53	5.2	24.78	.65	25.75	19.58	67.50	1.96	43	31	26
1	RC3	D75	7.6	7.5	41.5	4.58	5.1	24.35	.77	25.75	20.83	67.50	2.14	45	29	26
1	RC3	D90	7.6	7.5	42.0	4.52	5.1	24.13	.64	25.25	18.75	65.00	1.88	46	31	23
1	RC3	D120	7.5	7.3	38.5	1.03	5.6	8.91	.07	3.70	1.39	7.50	1.96	41	31	28
1	RC3	D150	7.6	7.6	41.5	4.34	4.7	22.17	.65	25.75	17.92	62.50	1.92	46	28	26
2	RC3	D15	6.5	6.3	45.5	.95	.4	.96	.67	6.45	3.42	5.50	.21	43	35	22
2	RC3	D30	6.7	6.9	44.0	3.20	1.6	7.65	.59	30.25	13.83	45.00	.81	44	35	21
2	RC3	D45	7.3	7.4	42.0	4.00	4.4	20.87	.53	27.25	17.50	62.20	1.36	44	32	24
2	RC3	D60	7.5	7.4	43.5	4.39	4.9	23.47	.81	25.50	19.58	66.30	2.00	46	30	24
2	RC3	D75	7.6	7.5	42.5	4.40	5.1	24.78	.69	26.75	21.25	70.00	2.33	46	29	25
2	RC3	D90	7.7	7.6	42.5	4.30	4.9	23.47	.68	26.25	19.58	66.30	1.87	46	29	25
2	RC3	D120	7.6	7.6	44.5	4.09	4.6	21.52	.65	26.50	17.92	63.80	1.87	45	30	25
2	RC3	D150	7.6	7.6	42.0	4.26	4.8	22.83	.64	26.25	19.17	66.30	2.00	45	31	24
3	RC3	D15	6.2	6.0	46.5	1.28	.6	1.41	.78	8.50	4.58	4.70	.28	44	34	22
3	RC3	D30	7.6	7.6	41.5	3.14	1.8	8.35	.45	28.00	14.92	48.10	1.78	44	32	24
3	RC3	D45	7.5	7.5	43.0	3.85	3.7	17.39	.60	26.75	17.92	60.00	1.70	44	30	26
3	RC3	D60	7.6	7.6	41.0	4.33	5.0	23.48	.64	25.50	18.75	66.30	2.12	46	30	24
3	RC3	D75	7.7	7.7	41.5	4.41	5.1	24.57	.72	26.50	20.83	70.00	2.28	45	29	26
3	RC3	D90	7.7	7.6	43.0	4.36	5.0	23.70	.65	26.00	19.58	67.50	1.86	45	32	23
3	RC3	D120	7.7	7.6	41.5	4.20	4.7	21.96	.63	26.00	17.50	63.80	1.86	44	33	23
3	RC3	D150	7.7	7.6	42.0	4.17	4.6	21.74	.65	26.25	18.33	66.30	2.12	45	31	24

ANALYTICAL DATA FOR RECONSTRUCTED SOILS SAMPLED IN 1983.

MINE D
SITE 11

DIG	MAT	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
1	RC3	D15	5.8	7.7	45.5	.66	.4	.75	.63	3.85	2.00	1.90	.11	46	33	21
2	RC3	D15	6.7	6.8	45.5	.71	.7	1.30	.27	5.25	1.96	.90	.23	56	28	16
3	RC3	D15	5.9	5.6	43.0	.71	.4	.66	.56	4.30	2.17	1.80	.06	43	33	24
4	RC3	D15	6.0	6.1	44.5	1.33	.5	1.17	1.04	8.55	4.04	1.20	.06	50	34	16
5	RC3	D15	5.9	5.7	41.5	.97	.4	.82	.63	6.15	3.08	1.70	.11	46	33	21
6	RC3	D15	6.7	6.8	41.5	.63	.6	1.11	.22	4.50	1.79	1.20	.21	57	28	15
7	RC3	D15	5.6	5.5	47.0	.72	.4	.65	.83	4.20	2.13	1.30	.13	44	33	23
8	RC3	D15	6.4	6.5	42.5	.96	.9	1.80	.28	6.25	2.67	1.60	.17	53	30	17

ANALYTICAL DATA FOR RECONSTRUCTED SOILS SAMPLED IN 1983

MINE D
SITE 12

DIG	MAT	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
1	RC3	D15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1	RC3	D30	7.1	7.0	41.5	4.26	2.9	15.65	.71	26.75	30.42	72.50	1.23	44	31	25
1	RC3	D45	7.2	7.3	46.5	5.29	4.1	23.70	.67	23.50	44.17	88.80	1.49	38	34	28
1	RC3	D60	7.4	7.5	47.0	5.68	4.2	25.43	.64	24.00	49.58	97.50	1.71	34	36	30
1	RC3	D75	7.4	7.3	42.5	5.65	3.9	24.13	.68	24.00	51.67	98.80	1.45	41	34	25
1	RC3	D90	7.4	7.2	44.0	5.37	3.9	23.26	.62	23.75	49.17	95.00	1.84	39	36	25
1	RC3	D120	7.5	7.7	45.0	5.37	3.9	23.48	.63	24.50	47.08	95.00	1.97	34	38	28
1	RC3	D150	7.5	7.5	45.0	4.58	3.6	19.35	.65	25.75	32.50	77.50	1.92	39	36	25
2	RC3	D15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2	RC3	D30	6.8	6.6	50.0	5.01	3.7	21.09	.62	26.00	37.92	81.30	1.62	29	43	28
2	RC3	D45	7.6	7.6	49.0	6.80	5.0	33.26	.68	24.00	63.75	120.00	1.83	29	43	28
2	RC3	D60	7.8	7.8	50.0	7.01	5.5	36.74	.73	24.00	66.25	126.30	2.00	25	40	35
2	RC3	D75	7.7	7.7	46.0	6.12	4.6	28.48	.77	24.50	53.33	105.00	1.95	36	36	28
2	RC3	D90	7.5	7.3	44.0	5.60	4.7	28.91	.78	25.00	49.58	100.00	1.86	39	35	26
2	RC3	D120	7.5	7.4	49.0	5.55	4.0	24.13	.76	24.75	49.58	98.80	1.95	29	40	31
2	RC3	D150	7.7	7.4	50.5	6.52	4.8	31.74	.69	24.50	63.75	121.30	1.61	25	43	32
3	RC3	D15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3	RC3	D30	7.4	7.2	44.5	3.90	2.3	12.17	.73	27.50	27.08	67.50	1.44	38	36	26
3	RC3	D45	7.6	7.4	48.0	5.36	3.7	21.96	.70	25.00	46.67	93.80	1.57	30	42	28
3	RC3	D60	7.7	7.5	48.0	6.97	5.1	34.35	.69	23.25	67.08	125.00	1.69	31	41	28
3	RC3	D75	7.9	7.6	58.0	7.62	5.7	40.65	.59	23.50	77.08	142.50	1.35	9	56	35
3	RC3	D90	7.9	7.7	50.0	7.06	5.4	36.09	.67	23.50	67.50	127.50	1.35	21	42	37
3	RC3	D120	7.7	7.5	46.5	5.95	4.4	26.96	.77	24.25	51.66	103.80	2.03	31	38	26
3	RC3	D150	7.6	7.4	47.0	5.58	3.9	23.91	.76	25.00	49.17	98.80	1.67	36	38	26

ANALYTICAL DATA FOR RECONSTRUCTED SOILS SAMPLED IN 1983.

MINE D
SITE 13

DIG	MAT	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
1	RC2	D15	7.6	7.4	40.0	.39	.2	.33	.43	3.30	1.03	1.30	2.09	47	32	21
1	RC2	D30	7.6	7.4	25.6	1.67	.3	1.13	.40	16.50	7.17	23.40	1.82	58	29	13
1	RC2	D45	7.7	7.3	29.0	1.02	.7	1.59	.29	8.15	3.96	12.10	1.83	57	33	10
1	RC2	D60	7.8	7.3	25.0	.81	1.0	1.98	.29	5.70	2.79	8.10	1.96	59	28	13
1	RC2	D75	7.5	7.3	29.5	2.59	.7	2.91	.60	29.50	11.17	43.10	2.22	60	25	15
1	RC2	D90	7.6	7.2	28.5	1.92	.8	2.78	.53	18.25	8.17	28.10	1.70	66	23	11
1	RC2	D120	7.3	7.2	40.5	2.57	.6	2.43	.85	28.25	10.92	41.60	1.87	45	32	23
1	RC2	D150	6.9	7.3	46.0	2.53	.4	1.89	1.09	30.50	8.25	41.60	2.47	47	28	25
2	RC2	D15	7.2	7.5	38.5	2.21	.2	.70	.72	28.50	6.83	33.80	1.96	45	30	25
2	RC2	D30	7.3	7.4	38.5	2.86	.9	4.35	.76	30.75	14.00	49.40	2.39	47	33	20
2	RC2	D45	7.4	7.3	37.0	2.96	1.8	8.22	.64	29.50	11.58	50.00	2.39	47	31	22
2	RC2	D60	7.4	7.4	38.0	2.93	1.8	8.00	.82	28.75	10.92	48.80	2.51	51	29	20
2	RC2	D75	7.5	7.5	42.0	2.93	1.6	7.09	1.00	29.25	11.25	49.10	2.56	47	27	26
2	RC2	D90	7.5	7.3	39.5	2.50	1.4	5.78	.73	24.00	10.00	39.70	2.04	47	31	22
2	RC2	D120	7.5	7.4	40.5	2.80	.9	4.04	.88	29.25	13.25	47.50	3.40	49	26	25
2	RC2	D150	7.3	7.2	33.0	2.00	.6	2.26	.55	20.50	9.00	30.60	1.15	42	34	24
3	RC2	D15	7.3	7.2	40.0	2.25	.3	1.37	.81	26.75	8.42	35.30	2.25	40	34	26
3	RC2	D30	7.5	7.3	38.0	2.93	1.0	4.96	.99	30.50	14.83	50.60	2.12	44	33	23
3	RC2	D45	7.5	7.4	40.0	2.96	1.7	7.74	.97	29.50	12.08	50.60	2.21	47	31	22
3	RC2	D60	7.5	7.4	39.0	2.79	1.0	4.70	1.01	29.75	11.00	46.90	2.21	45	32	23
3	RC2	D75	7.5	7.4	42.5	2.73	.8	3.65	1.09	30.00	11.50	46.30	2.80	48	30	22
3	RC2	D90	7.6	7.1	40.0	2.83	1.2	5.22	1.05	30.00	11.50	47.80	2.21	48	30	22
3	RC2	D120	7.5	7.2	39.5	2.96	1.4	6.48	1.13	29.50	12.92	50.90	2.55	48	30	22
3	RC2	D150	7.6	7.5	38.0	2.93	1.6	7.04	.87	27.75	12.17	48.40	2.12	55	28	17

ANALYTICAL DATA FOR RECONSTRUCTED SOILS SAMPLED IN 1983

MINE D
SITE 14

DIG	MAT	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
1	RC9	D15	5.4	5.0	61.0	.36	.3	.43	.54	2.85	1.19	1.30	.32	48	33	19
1	RC9	D30	5.8	5.5	67.5	.25	1.1	1.15	.06	1.63	.67	1.30	.38	ND	ND	ND
1	RC9	D45	5.9	5.5	44.0	.27	.4	.45	.11	1.70	1.05	1.70	.21	38	39	23
1	RC9	D60	6.1	5.9	37.5	.24	.8	.85	.25	1.40	.92	1.20	.21	41	32	27
1	RC9	D75	6.3	6.0	39.0	.24	1.4	1.37	.28	1.08	.75	1.10	.21	32	33	35
1	RC9	D90	6.6	6.3	39.0	.42	1.8	2.11	.38	1.55	1.21	2.70	.15	34	35	31
2	RC9	D15	5.3	5.1	56.0	.73	.3	.59	1.03	4.60	2.08	2.00	.26	ND	ND	ND
2	RC9	D30	5.6	5.4	60.5	.42	.3	.54	.08	4.20	1.92	3.50	.21	40	42	18
2	RC9	D45	5.6	5.4	44.0	.62	.3	.71	.10	5.55	3.42	6.00	.09	37	37	26
2	RC9	D60	6.1	5.9	46.5	.39	.7	.93	.31	2.25	1.50	2.40	.17	32	35	33
2	RC9	D75	6.4	5.9	40.0	.47	1.3	1.70	.36	2.10	1.42	2.70	.28	ND	ND	ND
2	RC9	D90	7.7	7.6	36.0	.43	2.4	2.57	.34	1.28	1.01	.50	3.33	42	32	26
2	RC9	D120	7.6	7.5	38.5	.57	2.2	3.22	.50	2.45	1.92	2.30	1.88	35	37	28
3	RC9	D15	5.4	5.1	52.0	.34	.3	.38	.26	2.08	.84	.80	.21	45	37	18
3	RC9	D30	5.7	5.2	47.5	.21	.3	.33	.00	1.40	.60	1.00	.17	41	40	19
3	RC9	D45	6.0	5.6	35.5	.25	.2	.25	.08	1.45	.85	.90	.19	31	46	23
3	RC9	D60	6.4	5.9	42.0	.26	.7	.64	.16	1.15	.78	.80	.23	33	40	27
3	RC9	D75	6.7	6.3	35.0	.39	1.7	1.78	.25	1.30	.93	2.00	.19	44	31	25

ANALYTICAL DATA FOR RECONSTRUCTED SOILS SAMPLED IN 1983

MINE D
SITE 15

DIG	MAT	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
1	RC9	D15	5.7	5.8	62.0	2.12	.6	2.26	5.02	20.50	10.25	16.60	.43	ND	ND	ND
1	RC9	D30	5.7	5.6	49.0	1.98	1.0	3.22	4.43	12.50	8.50	27.20	.23	39	45	16
1	RC9	D45	5.6	5.5	42.5	.93	1.2	2.35	.96	5.00	3.38	8.80	.06	25	58	17
1	RC9	D60	5.9	5.8	45.5	.51	2.2	2.74	.12	1.78	1.23	2.10	.23	7	53	40
1	RC9	D75	6.1	5.8	49.0	.96	2.7	4.61	.25	3.30	2.75	5.00	.02	14	50	36
1	RC9	D90	7.2	6.9	52.5	3.04	3.5	13.48	.56	16.25	14.25	27.80	1.20	18	46	36
1	RC9	D120	7.6	7.2	51.5	4.53	4.9	23.91	.81	22.00	26.67	59.10	4.93	ND	ND	ND
1	RC9	D150	7.8	7.8	44.0	2.52	7.2	19.78	.54	5.95	9.00	29.40	2.75	19	52	29
2	RC9	D15	5.7	7.8	64.7	1.87	.4	1.61	8.85	16.50	11.17	12.50	.06	38	38	24
2	RC9	D30	5.9	5.6	49.0	1.07	.4	.68	5.77	3.50	2.25	10.10	.06	40	42	18
2	RC9	D45	5.9	5.5	39.0	.46	1.1	1.20	1.46	1.63	.88	2.90	.09	19	57	24
2	RC9	D60	6.2	5.9	47.0	.60	3.9	4.09	.17	1.30	.94	2.00	.11	8	46	46
2	RC9	D75	6.7	6.7	56.0	1.77	6.3	13.04	.29	4.25	4.33	12.50	.06	2	51	47
2	RC9	D90	7.6	7.7	58.0	5.54	7.7	39.13	.72	24.25	27.08	72.50	2.13	5	56	39
2	RC9	D120	7.9	8.0	49.0	6.54	9.1	48.70	.86	23.00	34.17	88.80	4.26	25	43	32
2	RC9	D150	7.9	7.8	45.0	3.69	8.4	29.78	.68	10.00	15.17	47.80	2.39	41	35	24
3	RC9	D15	5.8	5.8	50.0	1.72	.2	.73	8.59	15.25	9.00	8.80	.38	ND	ND	ND
3	RC9	D30	5.7	5.4	45.0	1.13	.9	1.28	6.67	2.60	1.60	10.30	.21	34	45	21
3	RC9	D45	6.2	5.6	41.0	.55	4.1	3.52	1.12	.93	.56	3.50	.42	18	54	28
3	RC9	D60	7.2	7.1	50.0	.94	6.8	8.48	.25	1.73	1.35	5.40	.20	4	47	49
3	RC9	D75	8.0	7.8	60.5	2.87	10.4	26.74	.40	5.15	8.00	29.40	1.44	4	49	47
3	RC9	D90	8.2	8.0	61.5	4.45	11.9	40.65	.59	7.80	15.67	51.90	5.50	ND	ND	ND
3	RC9	D120	8.2	8.1	57.0	3.93	13.0	38.04	.59	5.40	11.67	43.40	6.13	13	52	35
3	RC9	D150	8.2	8.0	49.0	3.38	11.6	31.52	.53	5.30	9.50	37.50	3.38	28	39	33

ANALYTICAL DATA FOR RECONSTRUCTED SOILS SAMPLED IN 1983.

MINE D
SITE 16

DIG	MAT	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
1	RC9	D15	5.1	4.8	48.0	.37	.7	.73	.49	1.65	.83	.90	.13	35	43	22
1	RC9	D30	5.3	4.7	46.0	.38	.8	.98	.07	1.43	1.34	2.00	.06	33	44	23
1	RC9	D45	6.5	6.1	42.0	.51	.9	1.30	.10	1.90	2.29	2.20	.15	24	43	33
1	RC9	D60	7.4	7.3	43.5	.59	1.4	2.13	.12	2.43	2.25	1.70	.17	23	43	34
1	RC9	D75	8.1	7.7	42.0	.72	2.5	3.78	.15	2.48	2.08	2.70	1.19	41	34	25
1	RC9	D90	8.2	7.9	41.0	1.46	4.1	8.91	.22	4.55	4.83	11.30	2.31	38	36	26
1	RC9	D120	8.2	7.9	41.5	1.54	4.8	10.43	.26	4.20	5.08	14.40	2.78	39	35	26
1	RC9	D150	8.1	7.6	39.0	1.23	4.1	7.70	.25	4.15	3.08	12.10	2.57	40	36	24
2	RC9	D15	5.3	4.8	47.5	.30	.5	.49	.58	1.23	.53	1.10	.15	35	44	21
2	RC9	D30	5.2	4.7	47.5	.44	.7	.87	.08	1.93	1.63	2.20	.19	28	48	24
2	RC9	D45	5.8	5.6	42.0	.54	.7	.98	.11	2.15	2.42	1.30	.30	21	49	30
2	RC9	D60	6.4	6.1	39.5	.33	.6	.61	.10	1.20	1.13	.70	.42	27	40	33
2	RC9	D75	6.9	6.6	41.5	.37	.8	.91	.12	1.65	1.07	1.30	.42	32	35	33
2	RC9	D90	7.6	7.4	45.0	.50	.9	1.33	.16	2.43	1.58	2.00	.80	27	37	36
2	RC9	D120	7.9	7.6	36.0	.47	1.2	1.61	.23	2.00	1.60	1.80	2.45	39	35	26
2	RC9	D150	8.0	7.6	41.5	.48	1.0	1.35	.18	1.90	1.75	2.60	2.96	42	34	24
3	RC9	D15	5.3	4.8	47.5	.23	.4	.35	.48	.90	.37	1.00	.13	34	46	20
3	RC9	D30	5.1	4.8	44.5	.48	.5	.72	.12	2.28	1.75	2.00	.23	31	47	22
3	RC9	D45	5.6	5.3	45.5	.39	.4	.45	.13	1.70	1.45	.80	.30	15	48	37
3	RC9	D60	6.2	5.9	41.5	.26	.3	.30	.09	1.08	.74	.50	.11	26	41	33
3	RC9	D75	7.5	7.1	37.0	.33	.3	.33	.11	1.98	1.03	.40	1.18	39	36	25
3	RC9	D90	7.8	7.5	39.0	.33	.3	.34	.12	2.45	.95	.70	3.38	39	36	25
3	RC9	D120	7.9	7.7	40.0	.30	.2	.28	.14	1.80	1.03	.60	2.54	38	35	27
3	RC9	D150	8.1	7.7	36.5	.31	.2	.18	.17	1.60	1.23	.50	2.57	40	35	25

ANALYTICAL DATA FOR RECONSTRUCTED SOILS SAMPLED IN 1983

MINE V
SITE 1

DIG	MAT	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
1	RC4	D15	7.1	7.1	44.0	3.41	3.8	16.74	.95	26.75	11.58	45.30	.64	45	37	18
1	RC4	D30	7.8	7.6	38.5	4.77	7.4	35.00	.49	27.00	17.50	80.00	1.92	49	28	23
1	RC4	D45	7.8	7.8	43.0	5.98	10.7	46.09	.38	21.50	15.75	85.00	1.50	51	26	23
1	RC4	D60	7.9	7.8	40.0	4.91	8.2	37.83	.39	26.50	16.00	81.30	3.42	47	28	25
1	RC4	D75	7.7	7.3	32.0	5.16	8.0	38.26	.28	28.00	18.33	82.50	1.71	59	26	15
1	RC4	D90	8.0	7.8	40.5	6.64	12.4	60.00	.35	23.50	23.33	106.30	4.90	49	27	24
1	RC4	D120	7.7	7.5	37.5	2.89	6.9	21.74	.29	12.50	7.58	38.80	2.04	47	29	24
1	RC4	D150	7.7	7.7	39.5	5.00	8.9	39.35	.42	25.25	14.33	78.80	2.76	50	28	22
2	RC4	D15	7.0	6.8	46.0	3.44	4.1	17.39	1.01	24.50	11.67	42.50	.38	43	37	20
2	RC4	D30	7.7	7.8	42.0	6.73	12.2	60.87	.56	24.25	25.42	110.00	5.08	50	25	25
2	RC4	D45	7.8	7.8	39.5	6.15	12.0	56.52	.46	24.50	19.58	101.30	4.65	55	24	21
2	RC4	D60	7.9	7.7	43.0	6.25	11.5	54.78	.37	24.25	21.25	102.50	4.85	47	27	26
2	RC4	D75	7.9	7.8	42.0	4.68	7.8	34.57	.24	24.50	15.33	75.00	3.79	51	25	24
2	RC4	D90	7.8	7.8	38.0	4.57	6.5	31.09	.45	26.50	18.75	76.30	3.58	51	25	24
2	RC4	D120	7.8	7.6	41.5	5.04	8.6	39.78	.36	25.00	17.50	81.30	2.95	51	26	23
2	RC4	D150	8.3	8.3	117.0	1.33	49.8	25.87	.17	.54	.00	21.90	.25	14	47	39
3	RC4	D15	6.6	6.2	47.5	2.37	3.5	11.74	.94	14.50	7.92	28.10	2.28	44	38	18
3	RC4	D30	7.5	7.2	41.0	5.57	10.3	47.83	.44	23.50	20.00	85.00	1.65	47	30	23
3	RC4	D45	7.9	7.8	45.5	5.67	10.5	47.83	.36	24.25	17.08	91.30	8.25	49	27	24
3	RC4	D60	7.9	7.8	43.0	5.91	12.2	53.91	.39	21.75	17.50	95.00	.87	51	24	25
3	RC4	D75	7.8	7.7	44.5	6.31	12.4	57.39	.42	22.75	20.00	101.30	1.56	61	19	20
3	RC4	D90	7.8	7.8	38.0	6.03	11.3	53.04	.43	25.25	19.17	98.80	2.26	50	25	25
3	RC4	D120	7.9	8.0	63.5	7.34	16.3	73.91	.47	22.50	18.75	111.30	2.08	45	27	28
3	RC4	D150	8.3	8.3	131.5	1.95	35.0	24.78	.13	.73	.27	20.00	2.09	19	42	39

ANALYTICAL DATA FOR RECONSTRUCTED SOILS SAMPLED IN 1983

MINE V
SITE 2

DIG	MAT	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
1	RC4	D15	7.6	7.5	36.0	5.11	9.5	41.96	.24	26.00	13.08	73.80	.55	64	22	14
1	RC4	D30	7.8	7.7	40.5	4.25	6.0	27.39	.63	28.25	14.00	65.00	2.55	65	17	18
1	RC4	D45	7.7	7.6	36.0	5.65	10.0	50.43	1.01	30.50	20.83	97.50	1.91	79	8	13
1	RC4	D60	8.2	8.0	42.0	6.26	10.7	52.17	.67	23.50	24.17	95.00	8.30	44	31	25
1	RC4	D75	7.9	7.7	40.0	4.84	7.4	35.00	.62	25.50	18.75	73.80	2.98	68	16	16
1	RC4	D90	7.9	7.8	49.5	6.83	14.8	68.70	.51	25.50	17.50	106.30	3.40	38	29	33
1	RC4	D120	7.9	7.9	109.0	5.55	22.9	62.61	.45	10.75	4.25	73.80	2.03	29	37	34
1	RC4	D150	8.3	8.4	140.0	1.09	29.2	14.13	.06	.34	.13	4.90	1.27	22	42	36
2	RC4	D15	7.5	7.4	35.5	4.99	9.4	41.30	.22	24.75	13.67	72.50	1.61	65	20	15
2	RC4	D30	7.7	7.6	48.0	7.05	18.3	66.96	.53	24.50	2.42	110.00	2.03	52	26	22
2	RC4	D45	7.9	7.6	44.5	4.44	6.3	29.57	.54	28.00	16.67	70.00	5.50	46	29	25
2	RC4	D60	7.7	7.6	31.0	3.32	2.4	11.30	.40	30.75	15.67	53.80	2.54	69	15	16
2	RC4	D75	8.0	7.8	38.5	2.47	5.4	16.96	1.14	11.50	8.17	32.80	2.26	53	21	26
2	RC4	D90	7.9	7.9	47.0	5.75	10.8	49.57	.63	23.50	18.75	88.80	2.37	33	27	40
2	RC4	D120	8.2	8.1	111.0	6.31	19.7	68.70	.43	15.75	8.67	90.00	2.78	22	41	37
2	RC4	D150	8.3	8.3	145.5	1.29	32.1	16.52	.07	.40	.13	7.70	2.07	20	43	37
3	RC4	D15	8.1	7.7	37.0	4.64	10.8	42.39	.25	18.75	11.83	68.80	2.03	65	19	16
3	RC4	D30	7.7	7.5	38.5	5.73	10.9	50.43	.36	26.00	16.67	87.50	1.27	58	24	18
3	RC4	D45	7.7	7.6	54.5	5.28	9.1	41.74	.63	25.00	16.67	80.00	3.37	41	29	30
3	RC4	D60	8.0	7.9	48.5	4.32	4.6	23.04	.56	27.50	22.50	70.00	9.06	36	30	34
3	RC4	D75	8.2	8.0	49.5	6.83	12.5	61.74	.68	24.50	24.17	70.00	2.32	44	28	28
3	RC4	D90	8.3	8.2	65.0	8.07	17.2	81.74	.74	22.50	22.50	106.30	2.70	41	28	31
3	RC4	D120	8.2	8.0	113.5	6.30	18.7	72.17	.54	21.00	8.67	123.80	3.54	29	33	38
3	RC4	D150	8.5	8.4	114.0	1.91	42.7	24.35	.12	.53	.12	97.50	2.19	18	44	38

ANALYTICAL DATA FOR RECONSTRUCTED SOILS SAMPLED IN 1983.

MINE V
SITE 3

DIG	MAT	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
1	RC4	D15	5.8	5.5	48.0	1.53	1.7	4.43	.17	8.50	4.75	7.40	.17	51	36	13
2	RC4	D15	6.4	6.0	50.0	.81	3.7	5.04	1.15	2.23	1.59	2.80	.19	51	33	16
3	RC4	D15	5.3	4.8	46.5	.77	3.1	4.35	.14	2.60	1.38	3.40	.17	50	33	17
4	RC4	D15	5.9	5.7	48.0	.89	1.4	2.61	1.64	4.50	2.46	3.90	.21	52	32	16
5	RC4	D15	5.4	4.8	44.0	.41	2.3	2.39	.09	1.43	.68	2.20	.15	51	33	16
6	RC4	D15	5.4	5.0	46.5	1.07	2.2	4.22	.60	5.00	2.58	4.20	.21	51	34	15
7	RC4	D15	5.3	5.0	46.5	1.35	1.9	4.48	1.05	7.25	3.79	8.90	.11	51	34	15
8	RC4	D15	5.1	4.7	44.0	.75	2.3	3.52	.24	3.10	1.53	3.20	.15	52	33	15

ANALYTICAL DATA FOR RECONSTRUCTED SOILS SAMPLED IN 1983.

MINE V
SITE 4

DIG	MAT	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
1	RC4	D15	6.0	5.5	46.5	.50	2.7	3.17	.37	1.70	1.07	3.20	.11	34	49	17
1	RC4	D30	7.1	7.0	42.5	3.95	2.5	13.26	.78	30.75	26.25	62.20	1.74	37	37	26
1	RC4	D45	7.8	7.5	42.5	4.88	4.7	25.87	1.04	28.00	31.67	78.80	3.29	41	33	26
1	RC4	D60	8.0	7.6	43.0	5.44	7.1	36.30	.86	25.00	27.92	81.30	3.60	44	31	25
1	RC4	D75	7.9	7.7	43.5	2.81	3.7	13.91	.67	13.75	15.33	36.90	3.17	39	29	32
1	RC4	D90	7.7	7.5	44.0	4.90	7.3	37.61	.95	26.75	25.83	83.80	2.88	44	30	26
1	RC4	D120	7.9	7.7	45.0	5.17	7.7	34.35	.64	20.25	19.17	73.80	2.88	41	33	26
1	RC4	D150	8.6	8.5	162.5	1.37	37.9	16.30	.08	.28	.09	9.80	3.71	20	45	35
2	RC4	D15	6.3	5.9	45.0	1.25	4.3	8.17	.44	3.95	3.17	12.50	.22	41	40	19
2	RC4	D30	7.4	7.2	40.0	3.90	2.7	13.48	.77	28.00	22.08	63.80	2.41	39	35	26
2	RC4	D45	7.6	7.4	44.5	4.75	4.9	24.78	.69	27.00	23.75	72.50	2.88	40	32	28
2	RC4	D60	8.0	7.7	47.5	5.01	7.3	33.70	.35	20.25	22.92	72.50	2.73	37	36	27
2	RC4	D75	8.1	7.9	43.0	1.88	2.6	7.74	.51	9.00	8.58	23.10	4.17	45	30	25
2	RC4	D90	7.9	7.9	43.5	4.75	6.2	29.57	.47	24.25	20.83	77.50	4.00	43	32	25
2	RC4	D120	7.8	7.7	43.0	5.44	7.5	36.74	1.54	24.50	23.33	86.30	1.90	41	33	26
2	RC4	D150	8.6	8.6	134.0	2.08	42.2	23.48	.13	.49	.13	19.40	3.74	24	41	35
3	RC4	D15	7.0	6.7	49.0	1.32	3.0	6.87	.68	6.50	4.25	8.00	.26	47	36	17
3	RC4	D30	8.0	7.9	44.0	5.06	5.3	27.61	.65	25.25	30.00	87.50	3.74	37	37	26
3	RC4	D45	7.7	7.7	43.5	4.29	3.9	18.70	.87	26.50	20.00	63.80	3.46	42	33	25
3	RC4	D60	7.9	7.9	44.0	5.23	5.9	29.57	.86	25.50	25.42	77.50	3.60	44	32	24
3	RC4	D75	7.7	7.7	45.0	3.28	3.6	14.35	.54	19.50	13.08	44.70	4.53	45	31	24
3	RC4	D90	7.5	7.6	45.0	5.43	7.9	38.26	.62	23.75	22.92	88.80	2.60	43	31	26
3	RC4	D120	7.9	7.9	42.5	5.20	6.3	31.52	.94	25.00	25.42	86.30	3.88	42	32	26
3	RC4	D150	8.4	8.5	145.5	1.50	31.0	16.70	.11	.41	.17	13.40	2.55	20	42	38

ANALYTICAL DATA FOR RECONSTRUCTED SOILS SAMPLED IN 1983

MINE V
SITE 5

DIG	MaT	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
1	RC4	D15	7.1	6.6	45.0	.89	1.9	3.65	.22	5.60	1.92	4.60	.30	67	20	13
1	RC4	D30	7.0	6.6	39.5	2.04	5.4	13.48	.88	9.05	3.33	25.90	.22	68	19	13
1	RC4	D45	8.0	7.9	41.5	5.41	9.9	36.96	14.49	17.25	10.92	81.30	3.31	48	27	25
1	RC4	D60	7.7	7.7	45.0	4.54	6.8	28.70	3.26	24.25	11.33	70.00	1.51	46	29	25
1	RC4	D75	7.9	7.7	45.5	3.58	9.5	29.35	.56	12.00	7.00	49.40	1.98	47	28	25
1	RC4	D90	7.8	7.7	46.5	5.82	11.1	47.83	.58	21.00	16.33	92.50	2.16	62	20	18
1	RC4	D120	8.1	8.0	54.5	5.11	12.9	46.09	.33	15.75	9.75	77.50	4.03	43	31	26
1	RC4	D150	6.7	6.4	49.5	.93	5.5	7.17	.05	2.20	1.19	11.10	.30	16	42	42
2	RC4	D15	7.2	6.9	38.5	.74	2.4	3.83	.22	3.80	1.31	2.30	.43	67	21	12
2	RC4	D30	7.7	7.3	40.0	2.02	8.4	16.96	.56	5.25	2.96	18.40	1.51	63	20	17
2	RC4	D45	8.2	8.0	54.0	5.62	10.5	44.35	1.14	21.00	14.42	90.00	5.58	36	28	36
2	RC4	D60	7.8	7.8	48.5	6.53	10.9	46.09	10.51	20.50	15.42	103.80	3.87	49	26	25
2	RC4	D75	7.6	7.6	42.0	5.47	9.1	40.65	3.36	25.00	15.25	88.80	1.89	46	28	26
2	RC4	D90	7.9	7.8	42.0	6.40	13.2	59.13	.47	23.00	17.08	110.00	3.44	49	26	25
2	RC4	D120	8.0	7.9	44.5	7.11	15.5	70.43	.41	23.00	18.33	126.30	4.15	40	35	25
2	RC4	D150	7.9	8.0	59.0	7.27	14.6	68.70	.32	21.25	22.92	127.50	2.86	35	31	34
3	RC4	D15	7.6	7.1	43.0	.84	2.7	4.65	.19	4.45	1.63	5.30	.43	66	20	14
3	RC4	D30	7.4	7.2	41.5	4.25	7.8	30.22	1.28	21.00	9.33	63.80	1.38	62	21	17
3	RC4	D45	8.0	8.0	47.0	8.20	18.6	87.83	2.62	25.00	19.58	128.80	2.14	46	24	30
3	RC4	D60	7.8	7.8	45.0	4.97	10.7	43.48	1.90	20.50	12.58	72.50	2.84	43	24	33
3	RC4	D75	7.8	7.7	44.0	5.21	10.1	44.35	1.12	25.00	13.83	80.00	2.86	49	26	25
3	RC4	D90	8.0	7.7	43.5	5.27	10.1	45.23	.45	23.75	16.67	81.30	3.73	43	32	25
3	RC4	D120	7.7	7.6	46.0	5.47	9.8	45.23	.43	24.75	17.92	82.50	2.58	41	31	28
3	RC4	D150	8.0	7.7	47.5	6.23	11.1	54.78	.35	23.75	24.58	100.00	2.87	38	32	30

ANALYTICAL DATA FOR RECONSTRUCTED SOILS SAMPLED IN 1983

MINE V
SITE 6

DIG	MAT	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
1	RC4	D15	7.4	7.2	50.0	3.61	3.6	16.74	1.08	27.00	15.67	55.90	.11	63	24	13
1	RC4	D30	7.6	7.5	41.0	2.94	1.4	6.57	.40	29.75	14.17	49.10	3.61	45	31	24
1	RC4	D45	7.8	7.6	42.0	2.73	.9	4.04	.35	27.75	12.58	42.80	6.71	49	28	23
1	RC4	D60	7.7	7.4	37.5	1.25	.8	2.26	.26	10.50	4.92	14.10	1.55	71	14	15
1	RC4	D75	6.9	6.5	32.5	75	1.5	2.65	.17	3.95	2.38	7.30	.26	68	19	13
1	RC4	D90	7.7	7.5	40.5	2.68	.8	3.70	.40	31.00	9.75	42.50	3.01	62	23	15
1	RC4	D120	7.6	7.4	37.0	2.80	1.5	6.57	.48	28.75	10.58	43.80	3.55	47	29	24
1	RC4	D150	8.6	8.3	107.0	1.96	31.5	22.83	.17	.82	.23	19.70	5.31	24	41	35
2	RC4	D15	7.5	7.1	50.5	4.57	5.6	26.52	1.72	25.50	18.75	66.30	.17	61	25	14
2	RC4	D30	7.7	7.6	38.0	3.45	2.6	12.17	34	27.50	15.92	54.10	3.52	52	26	22
2	RC4	D45	7.8	7.6	40.0	2.54	.5	2.00	.37	27.50	11.83	40.30	4.55	51	26	23
2	RC4	D60	7.8	7.7	40.0	2.52	2.3	10.65	43	27.00	17.50	54.10	5.42	57	23	20
2	RC4	D75	7.3	7.4	29.0	3.42	.7	3.09	.51	31.25	11.50	42.20	3.00	51	27	22
2	RC4	D90	6.1	6.3	30.5	2.51	.6	1.48	37	8.70	4.58	13.80	.17	55	24	21
2	RC4	D120	7.5	7.4	51.0	1.10	6	1.72	.29	14.25	4.17	16.90	2.65	53	25	22
2	RC4	D150	8.4	8.4	107.0	1.57	30.7	19.78	.23	.61	.22	14.40	4.89	32	35	33
3	RC4	D15	7.4	7.3	44.5	3.41	3.0	13.91	1.10	29.00	14.00	53.10	.32	65	21	14
3	RC4	D30	7.8	7.6	40.5	2.89	1.3	5.87	46	29.50	13.00	45.90	4.14	47	29	24
3	RC4	D45	7.9	7.8	42.5	3.21	1.9	8.91	.54	28.00	16.17	51.30	4.98	47	29	24
3	RC4	D60	7.4	7.4	27.0	3.30	1.2	6.13	1.36	30.50	20.00	53.40	.70	88	3	9
3	RC4	D75	7.4	7.4	34.0	2.63	.6	2.48	67	28.50	12.75	40.00	2.25	65	19	16
3	RC4	D90	7.4	7.3	43.0	.64	.6	1.02	.26	4.55	2.00	3.80	2.14	49	27	24
3	RC4	D120	7.7	7.5	35.0	1.94	1.6	5.35	.34	15.50	6.67	24.40	1.11	60	21	19
3	RC4	D150	8.7	8.5	208.0	.76	27.2	8.61	.04	.20	.00	4.90	4.69	42	28	30

ANALYTICAL DATA FOR RECONSTRUCTED SOILS SAMPLED IN 1983

MINE V
SITE 7

DIG	MAT	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
1	RC4	D15	7.0	6.9	38.0	2.38	1.4	5.26	.81	18.75	10.17	24.70	1.07	64	20	16
1	RC4	D30	8.3	8.1	94.0	5.34	15.8	51.30	.30	10.50	10.58	70.00	5.14	28	37	35
1	RC4	D45	7.9	7.9	51.5	7.19	14.5	66.09	.39	22.75	18.75	105.00	3.99	43	30	27
1	RC4	D60	7.6	7.7	42.0	6.46	12.3	55.65	.49	23.75	17.08	92.50	2.42	69	16	15
1	RC4	D75	7.9	7.5	36.0	5.19	8.6	38.48	.41	25.00	14.83	75.00	2.03	67	16	17
1	RC4	D90	8.0	7.7	44.0	6.37	12.9	55.65	.41	22.50	14.67	91.30	2.99	59	22	19
1	RC4	D120	8.0	7.9	80.0	6.61	15.3	60.87	.35	19.25	12.25	91.30	2.90	46	29	25
1	RC4	D150	7.6	7.5	52.0	4.69	7.3	32.17	.42	24.75	14.33	70.00	1.15	44	29	27
2	RC4	D15	7.8	7.6	44.5	2.26	2.5	8.39	.51	14.25	8.67	27.20	1.44	70	16	14
2	RC4	D30	7.9	7.8	47.0	6.84	13.5	61.74	.40	23.00	18.75	101.30	3.06	52	26	22
2	RC4	D45	7.8	7.8	42.0	6.02	11.3	49.57	.38	22.75	15.83	86.30	3.12	67	16	17
2	RC4	D60	7.7	7.6	34.5	3.43	4.3	17.61	.41	23.00	10.67	49.40	2.47	63	19	18
2	RC4	D75	7.9	7.2	28.5	1.28	1.9	4.61	.37	7.95	4.00	12.80	.28	76	11	13
2	RC4	D90	7.2	7.1	31.5	2.63	4.4	14.78	.44	15.25	7.58	33.80	.21	67	18	15
2	RC4	D120	8.3	7.7	47.5	6.19	13.5	55.65	.26	19.00	14.92	88.80	4.23	65	20	15
2	RC4	D150	7.8	7.7	49.5	4.99	8.2	36.74	.29	25.25	15.25	77.50	3.38	39	32	29
3	RC4	D15	7.8	7.6	42.5	3.51	2.9	13.48	.67	26.50	18.33	53.80	3.10	73	14	13
3	RC4	D30	8.1	7.9	55.5	6.18	13.7	57.39	.38	22.50	12.42	92.50	3.95	47	29	24
3	RC4	D45	8.1	8.0	48.5	8.01	15.7	75.65	.37	22.75	23.75	122.50	3.87	52	24	24
3	RC4	D60	7.7	7.6	33.5	5.02	8.1	36.74	.35	25.75	15.25	76.30	.59	63	20	17
3	RC4	D75	7.7	7.6	35.0	5.98	11.1	49.57	.42	21.50	18.75	88.80	.23	61	18	21
3	RC4	D90	7.7	7.7	55.5	7.16	14.3	66.96	.28	22.25	21.67	110.00	1.03	45	29	26
3	RC4	D120	7.5	7.4	53.0	7.23	15.0	68.70	.36	22.00	20.00	108.80	1.64	49	29	22
3	RC4	D150	7.6	7.6	45.0	3.12	3.4	13.91	.41	21.75	11.75	46.60	4.78	48	29	23

ANALYTICAL DATA FOR RECONSTRUCTED SOILS SAMPLED IN 1983.

MINE V
SITE 8

DIG	MAT	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
1	RC4	D15	6.6	6.1	52.0	.95	8.7	9.35	.24	1.48	.83	6.70	.30	43	38	19
1	RC4	D30	7.2	6.7	48.5	3.16	13.9	31.74	.38	6.05	4.42	30.00	.46	43	24	23
1	RC4	D45	7.9	7.7	63.0	7.98	17.1	80.00	.60	23.50	20.42	123.80	1.68	43	30	27
1	RC4	D60	6.8	6.9	45.5	5.71	11.3	48.70	.55	24.50	12.58	80.00	.34	43	32	25
1	RC4	D75	7.8	7.5	52.0	6.31	12.2	56.52	.53	24.75	18.33	97.50	3.80	39	35	26
1	RC4	D90	6.5	6.1	47.0	2.88	15.6	28.91	.43	3.60	3.25	31.30	ND	36	40	24
1	RC4	D120	6.8	5.8	42.0	2.05	13.2	20.22	.34	2.85	1.88	20.30	.29	39	34	27
1	RC4	D150	8.4	8.1	183.5	1.49	32.3	16.96	.11	.42	.13	8.70	2.44	32	33	35
2	RC4	D15	6.7	6.2	50.5	.72	9.1	7.83	.24	.97	.51	4.20	2.69	42	39	19
2	RC4	D30	7.1	7.1	50.0	5.97	13.7	54.78	.56	17.00	15.00	77.50	ND	43	34	23
2	RC4	D45	8.0	7.8	54.0	7.24	14.9	67.83	.56	23.75	17.50	106.30	2.10	42	31	27
2	RC4	D60	7.7	7.7	53.0	7.37	15.0	69.57	.58	24.25	18.75	111.30	1.34	45	29	26
2	RC4	D75	7.7	7.4	53.0	6.36	14.5	60.87	.42	19.25	16.00	90.00	1.26	39	37	24
2	RC4	D90	7.0	5.8	48.0	1.84	11.7	17.83	.17	2.33	2.29	17.80	.29	41	39	20
2	RC4	D120	6.9	6.0	41.5	1.53	12.9	15.43	.28	1.95	.93	11.70	.38	41	37	22
2	RC4	D150	8.7	8.3	200.0	1.04	26.1	11.52	.09	.28	.11	6.70	1.81	31	33	36
3	RC4	D15	6.5	5.8	52.5	.67	8.4	7.35	.17	1.03	.51	3.90	.27	47	36	17
3	RC4	D30	6.6	6.0	48.5	5.35	12.7	48.70	.60	17.25	12.08	72.50	.38	48	34	18
3	RC4	D45	8.2	7.8	57.5	8.01	17.9	81.74	.67	23.25	18.33	122.50	2.86	42	33	25
3	RC4	D60	7.8	7.7	56.5	7.08	15.1	68.70	.53	24.50	17.08	108.80	2.77	44	31	25
3	RC4	D75	7.0	7.0	49.0	4.90	9.5	40.00	.43	22.25	13.50	67.50	.71	38	38	24
3	RC4	D90	7.0	6.8	45.5	4.95	8.2	36.74	.38	25.25	15.00	71.30	.29	39	38	23
3	RC4	D120	7.4	7.0	46.5	5.73	10.4	46.96	.76	26.50	14.58	83.80	.30	39	38	23
3	RC4	D150	8.3	8.3	173.5	1.34	30.9	16.52	.13	.40	.17	9.10	2.06	32	33	35

ANALYTICAL DATA FOR RECONSTRUCTED SOILS SAMPLED IN 1983

MINE V
SITE 9

DIG	MAT	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
1	RC4	D15	6.9	6.3	47.5	1.33	6.2	10.65	.43	3.90	2.00	10.60	.30	49	34	17
1	RC4	D30	7.8	7.5	51.0	6.73	16.8	68.70	.24	19.50	14.00	95.00	.58	44	31	25
1	RC4	D45	7.9	7.7	53.5	6.70	16.9	66.96	.20	17.75	13.50	92.50	.38	55	24	21
1	RC4	D60	6.4	6.1	45.5	3.64	12.5	34.57	.17	9.00	6.33	46.90	.19	48	31	21
1	RC4	D75	7.7	7.5	53.5	4.41	7.3	31.09	.20	19.50	16.50	6.10	2.94	16	51	33
1	RC4	D90	7.6	7.6	47.0	4.25	4.0	20.43	.53	26.25	25.42	66.30	2.94	31	38	31
1	RC4	D120	8.4	8.2	108.5	2.77	33.0	33.04	.27	1.43	.57	27.80	4.92	21	39	40
1	RC4	D150	8.6	8.5	116.0	2.39	45.1	28.70	.24	.63	.18	20.60	4.02	6	40	54
2	RC4	D15	6.6	5.9	47.5	.65	7.0	6.22	.21	1.05	.53	3.40	.21	48	36	16
2	RC4	D30	8.0	7.7	61.0	8.19	17.2	80.00	.32	22.75	20.42	116.30	.84	43	25	32
2	RC4	D45	7.7	7.6	47.0	7.73	17.2	73.91	.17	22.00	15.08	103.80	.42	58	23	19
2	RC4	D60	7.4	7.3	42.5	5.65	16.0	55.65	.13	13.25	10.83	73.80	.31	52	25	23
2	RC4	D75	7.6	7.6	46.5	4.10	7.5	29.13	.15	17.25	13.08	53.10	1.92	37	37	26
2	RC4	D90	7.4	7.5	48.5	2.87	2.5	10.22	.63	20.25	12.92	38.10	2.23	39	34	27
2	RC4	D120	8.2	7.9	72.0	3.41	14.4	34.78	.41	7.80	3.83	40.60	3.51	28	38	34
2	RC4	D150	8.5	8.5	125.5	2.09	45.6	23.91	.16	.44	.11	16.30	4.95	9	45	46
3	RC4	D15	6.4	5.8	50.5	.60	5.6	5.04	.25	1.10	.53	3.80	.29	46	39	15
3	RC4	D30	7.3	7.3	52.0	6.70	13.5	59.13	.22	23.50	15.00	91.30	.52	48	27	25
3	RC4	D45	7.7	7.5	44.0	6.70	14.6	61.74	.23	22.50	13.50	91.30	.50	66	19	15
3	RC4	D60	7.4	7.3	46.0	4.15	11.4	35.87	.14	12.75	7.08	50.90	.29	48	28	24
3	RC4	D75	7.4	7.4	44.5	3.38	7.8	25.43	.15	11.75	9.50	39.40	2.23	45	33	22
3	RC4	D90	7.9	7.8	58.0	1.69	3.2	8.35	.31	6.50	7.17	17.80	2.69	22	46	32
3	RC4	D120	7.4	7.5	57.5	2.65	4.7	15.43	.48	14.50	7.50	30.00	1.15	38	33	29
3	RC4	D150	8.6	8.5	224.0	.89	36.2	9.57	.07	.14	.00	3.70	3.87	29	37	34

ANALYTICAL DATA FOR RECONSTRUCTED SOILS SAMPLED IN 1983

MINE V
SITE 10

DIG	MAT	SDTH	PHH	PHC	PSAT	EC	SAR	NA	K	CA	MG	SO4	CARB	SND	SI	CL
1	RC9	D15	6.0	5.6	64.0	.34	1.8	1.96	.36	1.38	.95	1.30	.15	45	39	16
1	RC9	D30	6.2	5.7	61.0	.53	3.3	3.78	.35	1.68	.93	2.20	.04	41	40	19
1	RC9	D45	6.1	5.6	63.5	.60	3.6	4.17	1.10	1.85	.85	4.10	.15	39	39	22
1	RC9	D60	5.4	5.1	49.0	.34	1.9	1.76	.27	1.18	.47	2.40	.15	36	41	23
1	RC9	D75	5.1	4.9	44.0	.27	1.2	1.04	.19	1.13	.47	1.60	.15	42	31	27
1	RC9	D90	5.3	4.9	42.0	.28	.7	.69	.21	1.43	.58	2.20	.15	44	29	27
1	RC9	D120	7.1	7.1	43.5	.45	.5	.70	.21	3.70	1.17	.70	3.26	44	31	25
1	RC9	D150	7.9	7.6	39.0	.27	.6	.63	.14	1.90	.57	.70	5.09	43	32	25
2	RC9	D15	5.9	5.5	70.0	.22	1.6	1.30	.30	.97	.41	.80	.19	43	38	19
2	RC9	D30	5.9	5.5	55.5	.40	3.1	3.00	.34	1.20	.65	1.90	.21	42	38	20
2	RC9	D45	5.9	5.6	60.0	.47	2.8	3.00	.48	1.53	.83	2.70	.51	38	44	18
2	RC9	D60	5.5	5.0	53.5	.32	1.5	1.33	.39	1.15	.54	1.70	.15	36	42	22
2	RC9	D75	4.9	4.6	41.0	.27	.8	.77	.23	1.20	.56	1.50	.23	38	38	24
2	RC9	D90	4.9	4.7	41.5	.16	.8	.58	.13	.72	.29	1.10	.17	44	29	27
2	RC9	D120	6.0	6.0	43.0	.34	.6	.81	.17	2.35	.86	1.00	.28	45	30	25
2	RC9	D150	7.7	7.3	40.0	.28	.6	.65	.12	2.18	.64	.80	3.98	44	32	24
3	RC9	D15	6.1	5.6	59.5	.31	1.7	1.76	.40	1.40	.64	1.10	.26	44	36	20
3	RC9	D30	5.8	5.5	59.5	.68	2.5	3.61	.53	2.75	1.52	5.20	.41	43	37	20
3	RC9	D45	5.7	5.2	55.5	.57	4.3	4.35	.78	1.35	.72	4.60	.23	42	40	18
3	RC9	D60	5.2	4.8	49.0	.49	3.6	3.35	.24	1.20	.51	3.70	.23	32	45	23
3	RC9	D75	5.0	4.7	44.5	.39	4.1	2.96	.11	.74	.29	2.90	.21	38	35	27
3	RC9	D90	5.1	4.8	43.5	.47	5.8	4.00	.08	.71	.25	4.10	.17	48	27	25
3	RC9	D120	7.6	7.5	47.0	4.18	4.8	23.04	.68	27.00	18.75	66.30	2.02	44	32	24
3	RC9	D150	8.1	7.7	40.0	1.07	7.8	9.57	.07	2.15	.83	9.10	4.39	44	31	25